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METHODS AND PRINCIPLES OF TEACHING THE PRINCIPLES AND PRACTICE OF NURSING

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Methods and Principles of Teaching the Principles and Practice of Nursing

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PREFACE

The application of the methods and principles of teaching, to the teaching of the course in the *Principles and Practice of Nursing* constitutes the subject matter of this brief work, written in response to a growing demand for a book designed especially for teachers in schools of nursing. It is written, also, in recognition of the fundamental importance and inclusiveness of the subject, itself; and the great and unique opportunity in education that the course in nursing offers, to use and apply those principles and methods based upon the laws of learning.

This opportunity arises chiefly through the *necessity of teaching and learning by practical experience in the natural setting of the wards and out-patient department clinics.* Particular emphasis is, therefore, given to this phase of the course.

The text is divided into three main sections: The first presents the aims and content of the course, its method of selection and organization into topics, its proper sequence with special emphasis upon the importance and method of correlating theory and practice.

The second section presents methods of teaching. The application of the laws of learning is developed by the use of many practical suggestions and illustrations, by numerous projects outlined and others fully described. An example of a method of teaching a lesson in practical nursing, together with a suggestive thought-provoking outline of a nursing procedure, is given.

The third section deals with teaching and learning through practical experience. The content of this phase of the course, its selection and organization into topics, its sequence, correlation of theory and practice, the methods of planning the experience and assigning patients, methods of teaching, the use of projects, case studies, experience records, and a scientific method of work and study are all discussed.

Illustrations of methods in the form of tables, outlines, and forms or records are used throughout. These forms are being used in an experimental way at the Yale University School of Nursing. They should be regarded as an effort to work out certain principles, and not, in any sense, as established or perfected forms or methods. They will be revised as further experience in their use and development may indicate. References for further study are also included.

It is hoped that the text will be of interest to all who are concerned with nursing and of use to superintendents, instructors, supervisors and headnurses, and to all who are concerned with the vital problem of what to teach and how to teach this course in nursing—the heart of our curriculum, the course for which all the others exist.

It is the author's earnest wish that the publication of this text will stimulate further discussions and developments in the teaching of this all-important subject.

The writer wishes to express her appreciation and gratitude to Miss Isabel Stewart for her critical review of the manuscript, and to Dean Goodrich, and Miss Effie J. Taylor for their personal interest in reading the manuscript.

Thanks are also gratefully given to those teachers, instructors, supervisors and headnurses—who have so ably, so enthusiastically, and so patiently helped to develop these principles and methods of teaching and learning through the practical experience.

CONTENTS

PAGE

I. Aims of the Course 1

What Purpose and Importance Have Aims? What Determines Our Aims? What Is Our Basis of Selection? Summary of Teacher's Aims Selected.

II. Content of the Course of Study 5

Job Analysis of Duties, Difficulties and Problems; Subject Matter Organized Under Topics; Analysis of Ethical or Professional Ideals, Attitudes, and Appreciations; Analysis of Standards of Work; References.

III. Methods of Teaching 33

What Is Teaching? Preparation of the Teacher; Classroom Teaching; Method of Teaching Based on Laws of Learning; Laws of Learning—Law of Readiness; Law of Effect; Law of Exercise; Practice Preceded by Teacher Demonstration; Amount of Practice Based on Need and Individual Achievement; Law of Association—Teaching Principles; Teaching Skill (Form or Style and Execution); Teaching Standards; Teaching to Think; Teaching Qualities of Heart and Mind; Project Method in Teaching and Learning—The Producer's Project, the Consumer's Project, the Problem Project, the Drill Project; Developing the Project; Teaching a Lesson in the Principles and Practice of Nursing—The Teacher's Preparation of the Lesson; The Method of Presenting the Lesson; The Demonstration; Student's Practice in Classroom; The Assignment; Review Demonstration; Use of Examinations; Use of Text and Reference Books; References.

IV. Teaching and Learning by Personal Experience in the Wards, Out-patient Department, and Community 80

Content of the Course of Study; Subject Matter Organized Under Topics; Job Analysis of Standards of Work, Attitudes, and Appreciations; Content of the Course

SECTION PAGE

Indicated as Inside the Ward; Sequence of Topics or Services and Time Required in Each; Services Included in Experience.

V. Methods of Teaching in Wards and Clinics . 95

Methods Based on Laws of Learning—Mind-set or Purpose—Service to Patients; Mind-set or Purpose—Spirit, Ideals and Method of Science; Service to Patient as an Individual the Centre of Thought; Methods of Assigning Patients—Efficiency Method or the Patient the Centre of Thought; Advantages and Disadvantages of Methods; Use of Assignments and a Scientific Method of Study in the Wards; Study of Patient's Needs to Precede Nursing Care; Treatment Cards; Case Studies and Experience Records—Principles and Method of Using; Conferences; Case Study References; Case Study Committee; Written Instructions; Outline of Routine Nursing Care; Evaluation of Experience; Method of Keeping Records; Method of Grading; Value of the Written Word; References.

LIST OF FORMS, TABLES AND OUTLINES

PAGE

Tables I and II—Individual Procedure Cards . . 8 and 16

Outline of Course in the Principles and Practice of Nursing 24

Program of a Review Demonstration Conducted as a Project 50

Outline of a Method of Procedure in Nursing 68

Instructor's Outline of Special Procedures to be Taught in Communicable Diseases 84

Instructor's Outline of Special Procedures to be Taught in Pediatrics 86

Clinical Experience—Assignment of Patients 104

Treatment Card Attached to Chart 115

Outline of Case Study 117

Outline of Experience Record and Summary . 126 and 133

Outline of Routine Nursing Care in a Medical and Surgical Ward 129

METHODS AND PRINCIPLES OF TEACHING THE PRINCIPLES AND PRACTICE OF NURSING

SECTION I

AIMS OF THE COURSE

What Purpose and Importance Have Aims? — Aims determine our ideals, our mental attitudes, our standards of work, our attitude toward, and our relations with the patients, the students, and others. They also control, direct, or guide in the selection and development of the content of the course, and the means or methods of teaching both in theory and in practical experience.

To serve their best purpose, aims should not be fixed or final, because conditions change and aims must be expanded, extended, or altered to meet new needs or to emphasize the correction of particular weaknesses or defects in the school or profession at large.

What Determines Our Aims? What Is Our Basis of Selection? — 1. *The Purpose of the School.* Having selected properly qualified students, the purpose of any undergraduate school of nursing will be to give a basic course in nursing which will develop the character and capacity of the individual student, and give a sound foundation, in knowledge, skill, and methods of work, for future growth and development in active service in the various fields of nursing. 2. *The Relation of the Course in Nursing to Other Courses in the Curriculum and to the Various Fields for which students are being prepared.* Nursing is the heart of the whole curriculum, the object for which all the rest is being given. So, just as a glass prism draws to it and focuses rays of light, so will an instructor in the Principles and Practice

of Nursing consciously draw upon (and direct and aid the students in doing likewise) all the other subjects taught in the curriculum as a background of information, of principles, and of scientific methods of study and work. Again, just as the glass prism breaks up and redirects or refracts intensified rays of light previously focused, so should the course in nursing lead onward, redirecting and adapting knowledge and methods, etc., to needs wherever they may be met, whether in the hospital, out-patient department, or the community at large. For instance, if we believe in the claim that the scientific method of work used in the science laboratories, and by doctors in making a diagnosis, is the road to progress in knowledge, skill, and mental development (intellectual capacity); and that, by its use and application, more progress has been made in the last seventy years (according to an estimate made) than in the preceding two thousand, then we will use that method in planning the nursing care of patients: we will also give our students practice in using it, pointing out its adaptability to study and work in the hospital or in the community. (For application see page 56.) Likewise, if we believe the hospital to be merely a link in the community health program, then, in studying, with our students, the needs and in planning the care of a patient in the hospital, our horizon will not be limited by the walls of the ward or hospital but will embrace all those factors, family, industrial, and social, which have contributed to his illness or will contribute to his future welfare. 3. *The Habits of Thinking, Feeling, and Doing* (shown in ideals, mental attitudes, appreciations, knowledge, and skills) which we feel are desirable and necessary. For instance, if we believe that the ideal of service, and of altruistic purposeful endeavor, together with such qualities as fair-mindedness, initiative, good judgment, and reliability are desirable, then we must give material and methods, and provide situations and environment which will develop them. 4. *A Study and Analysis of our Resources and Difficulties,* our *Weaknesses and Defects* which need to be strengthened or altered. For instance, if we believe, as educators tell us, that we learn by doing;

but have found, as educators also tell us, that experience, while a wise teacher, may be unnecessarily hard, and our progress slow and uncertain, unless our experience is made intelligent, directed and controlled by principles and proper methods of work; then we will include those principles and methods in our course of study in the classroom and wards.

Summary of Teachers' Aims Selected. — 1. To render the best possible service to the patient, the family, and the community. 2. To insure sympathetic, intelligent, and skilled nursing care of patients, and a sound, basic education for student nurses, believing, as we do, that the one insures and is inseparable from the other. 3. *To help the students to help themselves* by such methods as the following: *a,* by explaining to them (as women who are expected and who intend to learn for themselves) the curriculum, the purpose and problems of the school; *b,* by teaching students the underlying principles and giving practice in recognizing and applying them to many varied problems or procedures; *c,* by teaching and giving them practice in using a method or technique of study and work (as well as a technique or skill in procedures) which may be used in any piece of scientific work, whether it be in a science laboratory, a hospital ward, in a social agency, or in any community health activity; *d,* by developing and fostering the student mind, the attitude of the research worker, and the attitude of a public health and social service worker. This may be accomplished by having students share with headnurses and instructors in building up a prescribed program of nursing care (including preventive measures) for each patient, based on a study not only of the present diseased condition but on the patient as a whole, a human being, a member of a family and of the community; *e,* by developing in students thoughtfulness, initiative, resourcefulness, a constructively critical attitude toward their own work, and a personal responsibility for the welfare and care of their patients; and also for the advancement, not only of their own knowledge and skill, but of the general content and methods of nursing education.

Students can't help themselves and will make little progress

in learning unless the environment and the situations which we create around them provide the opportunity, the stimulus, encouragement, and practice in meeting and solving problems by their own thinking, their own initiative, and their own responsibility as far as the patient's and their own welfare will permit.

SECTION II

CONTENT OF THE COURSE OF STUDY

The content of a course in the Principles and Practice of Nursing will necessarily include those ideals, attitudes, appreciations, knowledge, and skills to be taught in the classroom and that same content, made richer, broader, more vital and lasting by its natural setting, which can be learned only by personal experience in the wards, out-patient department, and the community.

The course to be given in the classroom and wards should be considered, not as separate subjects, but as one organic, interrelated whole, each supplementing and incomplete without the other. Indeed, it is important for us to remember, in this period of rapid change and expansion, that, according to modern thought in education, the strength of our whole educational system and our greatest and almost unique opportunity lie in the field of our practical experience. This is so because we have, in the situations presented in our wards, etc., those factors in education most truly vital and, perhaps, only essential; that is, the opportunity, nay, even more, the unavoidable necessity of learning (more or less) while doing.

Dewey says: "There is no such thing as genuine knowledge and fruitful understanding except as the offspring of doing," and that what is needed is "a reorganization of education so that learning takes place in connection with the intelligent carrying forward of purposeful activities."

Now, rendering nursing service to a patient, whether it be in the wards, clinics, or community, should surely be just that—the intelligent carrying forward of purposeful activities; not just intelligent and purposeful on our part, the teachers, but on the part of the students who are serving and learning; and our

classrooms (in contrast to the more or less artificial conditions and situations, remote from the problems of daily life, frequently met in the classrooms of other schools) are, or should be, the direct *outgrowth* of the needs or difficulties and problems met in the wards; and were merely *brought in* to supplement, to systematize and round out this practical experience by principles, methods of work and study, and the experience of others; to unite the content of knowledge into a proper whole, and to make the teaching uniform for the whole group. The vital part of the course, where the students really learn the principles and practice of nursing, is in the wards and clinics in the actual care of patients.

To meet the needs of the patients and the educational needs of the students are, therefore, not separate problems but one and the same—we cannot accomplish the one *adequately* without the other. That is, if a patient under the care of a student is not receiving good nursing care, then that student is not learning to be a good nurse; if the patient is receiving good care, then to this extent the student is learning good nursing.

This emphasis on teaching and learning by doing—the intelligent carrying forward of purposeful activities in the natural setting of the wards—is the rock on which we should build our course. To place the emphasis merely or largely on classroom teaching and ignore this unique opportunity (as in having a highly qualified instructor and an elaborate course in the classroom and no one with time to teach or a plan for teaching in the wards) would be to sell our birthright for a mess of pottage.

The content of the course may, therefore, be determined by a *job analysis* of: 1. *The duties, difficulties, and problems* which the students will meet in their practical experience both immediate (in the wards, etc.), and remote (in the community); 2. *The insight, knowledge, and understanding, and the ability* to use the facts, underlying principles, methods of work and study which make experience intelligent and fruitful; 3. *The habits of thought, feeling, and conduct*—the standards, attitudes, and appreciations—which develop character and insure present and

TABLE I

NURSING PRACTICE CARDS

Form 1

Miss _____ Class _____

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Housekeeping Duties															
Care of room or ward															
" " service room, bathroom, etc.															
" " linen room															
" " serving room, etc.															
" " clothes room, etc.															
Beds—closed beds															
open "															
Care of beds and bedding															
Making Patients Comfortable															
Moving and lifting patients															
Adjusting pillows															
" backrest, bolster, etc.															
Use of air or cotton rings, etc.															
" " Gatch frame															
" " cradles															
" " air mattresses															
Changing linen for bed patient															
Prep. and assisting to chair															
" " " to stretcher, etc.															
Changing, turning mattress															
Rubbing back, etc.															
Protecting eyes															

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Cardinal signs															
Temperature, pulse, respiration															
Apical pulse															
Blood pressure															
Asst. with cardiograph															
Charting Ward Records															
Admitting Patients															
Admission slips and chart															
" bath															
Care of valuables, clothing															
Discharging Patients															
Toilet, dressing, etc.															
Care of valuables, clothing, etc.															
Instructions given															
Chart and discharge slips, etc.															
Special Nursing Care															
Care of diseased mouths															
" " infected beads															
Washing hair															

TABLE I—(Continued)

Bed rest — orthopnea
Preparation for outdoors

Morning Toilet
Tub bath
Bed bath — adult
" " — child, infant
Care of mouth
" " hair and nails
" " back

Preparation for the night
Evening toilet
Special wants of patients
Prep. of room or ward

Feeding Patients
Preparation of patient
" and serving tray
Feeding helpless patient
Special diets — prep.
Feeding child
" infant
Serving cracked ice

Body Elimination
Use of bedpan, etc.

Collecting specimens
Urine
Feces
Sputum
Stomach contents

Care of infected body
" " " bedsores

Prep. and Asst. in Examinations
Routine physical
Examination of eyes
" " ears, nose, throat
Gynecological positions:
dorsal, standing, Sims, lithotomy,
Trendellenberg, knee chest
Vaginal and uterine
Rectal or proctoscopic
Cystoscopic

Gastro-Intestinal Treatments
Lavage
Test Meals
Expression of stomach contents
Gavage
Nasal gavage
Gastrostomy, enterostomy
Simple, cleansing enema
Oil enema
Carminative enema
Nutritive "
Emollient "
Stimulating "
Barium "
Prep. for G. I. series X-ray
Enteroclysis
Proctoclysis
Murphy drip
Suppositories

TABLE I—(Continued)

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Genito-urinary Treatments															
Vaginal douche															
Vaginal smear															
Asst. vaginal dressing															
" intra uterine douche															
Perineal dressing															
Catheterization															
Bladder irrigation															
" instillation															
Counter Irritants, etc.															
Mustard paste															
Linseed poultice															
Application of fomentations to															
abdomen, kidneys, joints															
Application of turpentine stupes															
Cantharides plaster															
Methyl salicylate															
Pre-operative Care															
Physical — bath, etc.															
Local preparation															
Ether bed, etc.															
Care en route															
Post-operative Care															

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Minor surgical Procedures															
Making dressings, etc.															
" antiseptic solutions															
Sterilization and care of instruments,															
basins, glassware, etc.															
Use, care, and sterilization of rubber															
gloves															
Scrubbing hands															
Prep. of patients for dressings															
Application of binders															
" " adhesive strapping															
Assist with dressings															
" phlebotomy															
" " lumbar puncture															
" " spinal injection															
" " hypodermoclysis															
" " infusion															
" " intracranial infusion															
" " blood culture															
" " transfusion															
" " intracranial transfusion															
" " chest aspiration															
" " aspiration of pericardium															
" " abd. paracentesis															
" " artificial pneumothorax															

TABLE I—(Continued)

First Aid & Emergency Treatments
Care during convulsions
" " shock
" " Hemorrhage
Epistaxis
Hematemesis
Hemoptysis
Uterine
Fainting
Use of mouth gag
" " pulmotor
Artificial respirations
Treatment of burns, etc.
Orthopedic Measurea
Use of spiints
" " slings
" " casts
" " strapping
feet, chest, back, knee
Fracture board
Bandaging
Use of Bradford frame
" " sandbags
Restraining Measures
Use of sideboard (wood)
" " " (canvas)
" " restraining sheet
" " anklets, wristlets
" " dry pack

Admin. of Medicines
By mouth
" rectum
" inunction
" inhalation
Sub-cutaneously
Intramuscularly
Intravenously
Admin. of oxygen
Physiotherapy
Hot water bag
Electric pad
Baking, local, general
Prep. for sun bath
" " ultra violet ray
Use of cautery
Dry hot pack
Cupping
Ice bag
Ice coil
Massage
Foot bath
Sponge bath
Typhoid tub bath
Alcohol sponge
Sedative bath
Cold pack (temp.)
" " (sedative)
Spray or slush bath
Spinal douche
Appl. of cold compresses to chest, joints, head, etc.

future happiness and success for our students and, through them, for our patients and for humanity.

A Job Analysis of Duties, Difficulties, and Problems will include the following: 1. To adjust to the conditions of the classroom and to other members of the class forming a social group; 2. To adjust to and learn how to study and to use the various facilities for study; 3. To adjust to the new situations and complex conditions met in a large institution having many departments, a large and varied personnel serving a variety of purposes but having, however, a single objective—service to the patients and the community in the prevention and cure of disease; 4. To adjust to and share in service and responsibility in all matters relating to patients, each of whom presents an individual problem, social or family, mental and physical, medical and nursing; 5. To co-operate with all engaged in this service—members of the medical school, school of nursing, administrative staff, and other departments such as dietary, X-ray, social service, laundry, etc.; 6. To carry out the various duties and procedures listed on Tables I and II; 7. To acquire knowledge of the ideas, facts, and *principles* which will explain the reason *why* and give content, meaning, and intelligent direction and control of the above procedures, thus broadening their use and application to many varied situations; 8. To adjust to situations such as night duty, unexpected demands and emergencies, and to the mental and physical strain of combined theory and practice; 9. To keep and understand accurate, concise, statistical records such as charts, case studies, experience records, etc; 10. To teach patients, friends, or relatives such procedures as making feedings for the baby, bathing the baby, and preparing special diets such as diabetic diet, etc.

Simple Job Analysis of Procedures. — Each procedure, duty, or problem should likewise be analyzed into elements or steps which, like a good recipe, give directions simple and clear enough to be readily grasped and carried out by the students. For various reasons such an analysis cannot be given here. The scope of the pamphlet will not permit, the conditions vary in

each hospital, and (while standardized methods of procedure are desired by many) every hospital has its own technique which seems to it best fitted for its own needs. In addition there are several books outlining the technique of procedures available. (See outline of procedure on page 68.)

Subject Matter Organized Under Topics. — Having made the above analysis and collected the necessary facts, principles, and methods, it will be found very helpful to organize this subject matter into major topics (with their divisions and subdivisions) which indicate for ourselves and our students our main objectives. Such topics define and give a general survey of the course in proper perspective. They guide and direct the students in their aims and plan of work and study, organizing and systematizing their knowledge, showing facts in their true relationships and giving them better control over what they are learning.

These major and minor topics, in a course in the Principles and Practice of Nursing, would, of course, include both theory and practical experience as shown in the following outline. In such a limited study, no attempt can be made to give the subdivisions of topics or outline of lessons. Some suggestions for such an outline may be found in the Revised Standard Curriculum prepared by the Education Committee of the National League of Nursing Education. In general it may be said that topics should be subdivided into units or lessons, the size or amount covered depending upon the capacity of the students and their ability to handle work alone.

The form of the outline is meant to suggest the desirability of the close correlation of theory and practice, the theory either directly preceding or dovetailing with the practice as far as conditions will permit. This close correlation is undoubtedly one of our most difficult problems; but if we set this as our goal and consciously strive to reach it we are much more apt to succeed, for we all know that where there is a will there is a way.

This does not mean, as the outline seems to suggest, that a

TABLE II

Table II

NURSING PRACTICE CARDS

Form 2

Miss_____ Class_____

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Treatments to the Ear															
Irrigations															
Asst. with examinations and tests															
" " dressings															
" " paracentesis															
" " Inflation of drum															
" " removal of wax, etc.															
Prep. for operation															
Instillation of drops, etc.															
Application of heat															
" " cold															
" " leeches															
Bandaging															
Treatments to the Eyes															
Irrigations															
Instillation of drops															
Application of ointments															
" " powders															
" " cold															
" " heat															
Taking eye smear															
Prep. and asst. with dressings															
" " " " operations															
Removing foreign bodies															
Bandaging															

	Classroom	Supervisor	Pupil demonstration	Medical, male	" female	Surgical, male	" female	Obstetrics	Pediatrics, medical	" surgical	Communicable, adult	" children	Dispensary	V. N. A.	
Treatments to Nose and Throat															
Instillation of drops															
" " ointments															
Nasal irrigations															
Asst. antrum aspiration															
" " irrigation															
Use of sprays and gargles															
Painting throat															
Throat irrigations															
Inhalations															
Croup tent															
Asst. with intubation															
" " tracheotomy															
" " dressings															
Use of ice collar															
Control of bleeding															
Taking cultures															

TABLE II—(Continued)

Diet Kitchen

	Demonst.	Practice		Demonst.	Practice
Weighing and Figuring			Preparation of broth		
Diabetic diet			" " purin		
Nephritic diet			" " gruels		
Low protein diet			" " cereals		
Salt poor diet			" " vegetables		
Typhoid liquid diet			" " scraped beef		
" soft "			" " beef juice		
" solid "			" " salads		
Fat free			" " bran muffins		
Anti-constipation diet			" " desserts		
Cardiac soft "			" " junkets		
High caloric liquid diet			" " custard		
" " soft "			" " jello		
" " solid "			" " baked apple		
Obesity diet			" " puddings		
Sippy "			" " ice cream		
Lenhartz "					
Schmidt "					

TABLE II—(Continued)

Formulae Room	Demonstration	Practice	Operating Room	Demonstration	Practice	Special Measures in Communicable Diseases	Demonstration	Adult	Child
Care of equipment			Tour of operating room			Gown technique			
Nipple technique						Hand "			
Sterilization of milk			Duties of Circulating Nurse						
" " formulae			Care of appearance of room			Disinfection			
" " utensils			Technique to be observed			Mattresses and pillows			
			Care of visitors			Blankets			
Preparation of Formulae			Attention to assistants			Bed linen			
Unboiled formulae			Use of cautery			" rubbers			
Sweet milk & flour mixture			Application of headlight			Food trays and dishes			
Lactic " & barley, flour			Prep. room for operations			Utensils			
Butter fat and flour mixture			" nurse " "			Books and toys			
Sweet milk with butter fat			Changing from one case to another			Instruments			
			"Setting up" for operations			Patients' clothing			
Rules and Recipes			Needles and suture materials			Care of secretions from eyes, ears,			
Whole powdered milk			Use, method of handling, etc.			nose, and throat			
Skim " "			Prep. of saline flasks			Care of discharges,			
Protein milk			" " drums and supplies			stools, urine			
Lactic acid milk			Cleaning room after case			Care of room on discharge			
Acidophilous milk			" and sterilizing basins,			Taking nose and throat cultures			
Bulgarian milk			needles, glassware, instruments			Making eye smear			
Higgins solution									
Farina			Autoclaving— salines			Prep. for Administration of			
			Dry goods, rubber goods			Antitoxins			
Milk Room Management			Solutions, arm soaks			Vaccines			
Sorting feedings, etc.			Distillation of water			Schick test			
			Sterilization " "			Tuberculin			
Feeding of Children			" " catgut			Admission of patient			
Bottle feeding			" " rubber tissue			Discharge of patient			
Gavage									
Lavage— mouth			Instruments— names						
nasal			Instruments for different cases						
Serving trays									

TABLE II—(Continued)

Computing Calorie Values	Cystoscopy Room	Obstetrics
Infant	Tour of room, etc.	Pre-Natal
Child	Care of patients	Pelvic measurements
	" " specimens	Foetal heart
Serving Special Diets	" " instruments	Blood pressure
Diabetic	" " rooms	Palpation
Nephritic		Binder bandage
	Preparation of	Delivery Room
	Rooms for day clinic	Pre-delivery care
	Patients for plain exam.	Normal delivery
	" " complete exam.	Version and extraction
	" " kidney lavage	Forceps, low, high
	" " minor treatments	Bougie insertion
	Sterilization and packing basins	Voorhees bag insertion
	Cleaning catheters and cystoscopes	Craniotomy
		Caesarian section
	Accident Room	Post-delivery care
	Tour of room, etc.	Uterine packing
	Notifying doctor	
	Use of record book	Postpartum
	Writing histories	Care of perineum
	Admitting patients, etc.	" " breasts
	Collecting charges	Breast binder
	Care of stretcher	Breast feeding
	Asst. doctor with	Intra-uterine culture and douche
	Accident cases	
	Application of splints, casts,	Nursery
	plaster bandages	Daily care of infant
		Feeding— breast, bottle, gavage

student should have all her experience in any one service at one time. On the contrary, it is deemed advisable by many that the experience be divided and the student return at a later period not only that she may experience it as a more mature, skilled, and better informed student but that she may view it from a different angle, with either a related or a contrasting background —surgical and medical, operating room and surgical ward, adult and child, out-patient and hospital patient, etc.,—the contrasts and comparisons opening her eyes, making things which before were not visible stand out clearly and sharply.

For this reason the outline suggests that experience in any one service should include the clinic in the out-patient department, where the emphasis is on the social and preventive side, so that the students may get this complete picture of the patient and of diseases at different stages and with different manifestations.

The sequence suggests the desirability of having the basic or foundation subjects precede; for instance, of having aseptic technique in the operating room precede obstetrics and communicable diseases, and nursing in medical diseases of adults, and children (pediatrics) precede nursing in communicable diseases which require adaptation owing to the new and, especially with children, difficult factor of communicability.

In all the above divisions of the course in the Principles and Practice of Nursing, it is urged that, both in theory and, especially, in practice, the social or community aspects be emphasized both from the social and public health standpoint. All such factors are considered because we believe that, in a community health program, there is no sharp line, in purpose or function, between the hospital or out-patient department and the community; or between the hospital and the home, whether it be rich or poor; or between the hospital and any community activity concerned with the health needs of the individual or family.

The hospital is, itself, a community activity, a necessary link in the whole health program; and a patient in the hospital is still a member of a family and the community—indeed the sick-

ness often accentuates the family and community relationship to school, industry, church or society, etc.

From this standpoint a nurse's relation and responsibility to the patient is the same whether she be nursing in the hospital, "specialling" in the homes of the rich, doing visiting nursing in the homes of the poor, doing school, industrial, medical social service, or public health nursing. In each she is serving the community, doing social and public health work as a nurse and health teacher in the prevention and cure of disease.

It is urged that this point of view be emphasized throughout, beginning with the very first lesson, because we believe that, unless it forms an integral part, permeating and interwoven with every thought, feeling, and service rendered our patients, it will always be external, something grafted on as an afterthought. If given at the end, as a separate course, the difference in the care and welfare of the patients would be, to use a very homely simile, just like adding the forgotten salt after the potatoes are cooked.

This does not mean that students are supposed to be prepared, without postgraduate courses, for special fields in nursing; but that they should be taught the fundamental principles of community nursing as an integral, organic, and functional part of the basic or undergraduate course in nursing. They should have the same broad social aims and point of view, should talk the same language, as it were, and, in meeting the needs of a patient in the hospital, should use methods of study, of observation, of gathering and recording data, and methods of work which would be applicable and useful in meeting the needs of an individual (taking the family as a unit) in the broader field of the community.

Analysis of Ideals, Standards of Work, Attitudes and Appreciations. — What has been said about teaching the community aspects of nursing may be said with even greater emphasis of those ideals, standards of work, attitudes of thought, of feeling, and our appreciations, which we all know make up the sum total of what we are, what we do, and the way in which

CONTENT OF THE COURSE IN THE PRINCIPLES AND PRACTICE OF NURSING

TOPIC I—BRIEF SURVEY OF THE FIELD OF EXPERIENCE IN NURSING—EMPHASIS ON MIND-SET AND PROBLEMS OF ADJUSTMENT

Given in the Preliminary or Pre-clinical Term—Emphasized Throughout the Course

	REQUIRED				REQUIRED		
THEORY	Hours per Week Class	Hours per Week Study	Total Hours per Week	PRACTICAL EXPERIENCE	Hours per Week Wards, Clinics, etc.	Hours per Week Study	Total Hours per Week
A. Hospitals, their relation to the Community Health Program (and to the University, if affiliated) B. Nursing, its aims and scope; relation to other courses in the Curriculum; to the hospital; to the university or other department of education; and to the Community Health Program C. Problems of Adjustment				A. Conducted visits to the hospitals, to homes, schools, health and social agencies, and other hospitals in the community B. Conducted visits to facilities for study such as libraries, museums, etc.			

REFERENCES

Hospital Annual Report, School of Nursing, University, and other school reports;
Harmer's Principles and Practice of Nursing, and other books on Nursing;
Articles from The Modern Hospital, American Journal of Nursing, Public Health Nursing Journal, The Survey, and other journals, and the daily papers.

TOPIC II—PRINCIPLES AND METHODS OF MAINTAINING THE ESSENTIALS OF HEALTH EMPHASIS ON NURSING IN RELATION TO PREVENTIVE MEDICINE

Given in the Preliminary or Pre-clinical Term—Emphasized Throughout the Course

	REQUIRED				REQUIRED		
THEORY	Hours per Week Class	Hours per Week Study	Total Hours per Week	PRACTICAL EXPERIENCE	Hours per Week Wards, Clinics, etc.	Hours per Week Study	Total Hours per Week
A. The Environment in Relation to the Patient (a) Cleanliness (b) Ventilation, heating, lighting (c) General atmosphere of comfort, hominess, attractiveness, system and order, etc.				Supervised practice in the wards of nursing methods and procedures taught in the classroom. (See Producer's Project and lesson on page)			
B. The Patient (a) Happiness, comfort and ease, mental and physical (b) Rest and sleep (c) Nutrition (d) Cleanliness (e) Eliminations							

REFERENCES

Books on personal hygiene, hygiene and sanitation, and the underlying sciences (See Standard Curriculum)
Harmer's Principles and Practice of Nursing, and other books on Nursing

CONTENT OF THE COURSE IN THE PRINCIPLES AND PRACTICE OF NURSING—(Continued)

TOPIC III—PRINCIPLES AND METHODS OF RESTORING HEALTH—EMPHASIS ON NURSING IN RELATION TO CURATIVE AND PREVENTIVE MEDICINE

Given during Clinical Experience—Junior, Intermediate and Senior Years

REQUIRED				REQUIRED			
THEORY	Hours per Week Class	Hours per Week Study	Total Hours per Week	PRACTICAL EXPERIENCE	Hours per Week Wards, Clinics, etc.	Hours per Week Study	Total Hours per Week
A. Nursing in Medical Diseases (including mental, physical, social and public health aspects)				A. Experience in medical wards, medical out-patient clinics, diet and special metabolism kitchens			
B. Nursing in Surgical Diseases (including above)				B. Experience in surgical wards, surgical and dental clinics and operating room			
C. Nursing in Obstetrics and Gynecology (including above)				C. Experience in obstetrical and gynecological wards and clinics			
D. Nursing in Pediatrics (including normal development, habit formation, behavior problems and abnormal conditions and diseases of infancy and childhood)				D. Experience in pediatric wards and clinics; if possible, experience in a Modern Nursery School and observation in activities of Child Welfare Organizations in the community			

CONTENT OF THE COURSE IN THE PRINCIPLES AND PRACTICE OF NURSING—(Continued)

TOPIC III (Continued)—PRINCIPLES AND METHODS OF RESTORING HEALTH—EMPHASIS ON NURSING IN RELATION TO CURATIVE AND PREVENTIVE MEDICINE

Given during Clinical Experience

	REQUIRED				REQUIRED	
THEORY	Hours per Week Class	Hours per Week Study	Total Hours per Week	PRACTICAL EXPERIENCE	Hours per Week Wards, Clinics, etc.	Hours per Week Study	Total Hours per Week
E. Nursing in Communicable Diseases (emphasis on the community aspects)				E. Experience in wards and clinics with adults and children			
F. Nursing in Mental and Nervous Diseases				F. Experience in wards and clinics			
G. Nursing in the Community				G. Experience in Community Nursing Visiting Nurse Assoc. Public Health Assoc. Medical Social Service			

REFERENCES

See National Curriculum for references in each subject.

NOTE:- Class is used above to indicate classroom instruction in general.
Hours of Study are 1½ hours to 2 hours study for each hour of theory, two hours of laboratory being equivalent to one hour lecture etc.

we do it—in other words, our whole character and personality.

These more or less abstract, complex terms or qualities cannot be taught or learned in a course of ethics; neither can they be left to chance. They are governed by the same laws of learning and are acquired or learned as any skill or knowledge is learned, that is, by purposeful, intelligent practice in doing. They not only control but are inseparably interwoven with our daily conduct, therefore form an integral part of the content of our course in nursing.

An Analysis of Ethical or Professional Ideals, Attitudes, and Appreciations will include the following: 1. The ideal of *service*—the desire and the will to render the most intelligent, unselfish, efficient, and skilled nursing service to the patient, the family, and the community, without regard to prejudice, nature or difficulties of the diagnosis, social status or personality of the patient, etc. 2. The ideal not only of saving life but of building *health*—the desire to raise the standards of healthful living by sharing our knowledge and skill with patients, relatives, and other members of the community. As a teacher of health, one engaged in the prevention and cure of disease, a nurse should maintain the highest possible standards of personal health. 3. *Lofty standards of duty*—a sensitive regard for the sacredness of the intimate, confidential relationship between patient, family, and nurse and their absolute dependence upon her integrity, knowledge, and skill: To be such in character, reputation, knowledge, and skill as to win the respect and confidence of our profession and the community. 4. *Spirit of co-operation*—the will to share and have others profit by our experience, to co-operate and co-ordinate with other members of the profession and with other professions in the common purpose of serving humanity. 5. The *ideal and spirit of progress*—to maintain and elevate the quality of service and the social reputation of the profession; to improve our aims and methods; to increase our body of knowledge and skills, and to maintain and elevate the standards

of nursing education. 6. The *ideal and spirit of science*—the spirit of inquiry, of investigation, keen observation, accurate recording and thoughtful analysis of facts revealed, intelligent application with constant testing and measuring of results; a scientist's love of accuracy and of truth, a sensitive conscience in regard to personal error and one's responsibility toward the patient. 7. The *artist's and craftsman's imagination and delight in creating,* in *doing* or *making* something and the *æsthetic appreciation of good workmanship,* not just in its mechanical aspects but for the thought and feeling expressed in it, which we all know are the qualities which make art fine and lasting. 8. *Self-criticism*—The artist's critical eye, the *constructively critical attitude* which insures progress through self-testing, self-direction and education. 9. Such *qualities* as a sense of humour, initiative, judgment, adaptability, reliability, unselfishness, tactfulness, self-control, etc., are all very desirable and necessary, therefore form part of the content of our course of study to be taught and learned.

Analysis of Standards of Work.[1]—A student's work as a whole as well as each procedure or service rendered to the patient may be measured and should be directed and controlled by the following standards. A student considers whether or not she is working with due regard to:

1. The safety of the patient, the nurse, and others.
2. The therapeutic effect of the treatment or service.
3. The comfort and happiness of the patient, mental and physical.
4. The economy of energy:
   a. The patient's energy—to what extent is it advisable? How far should the patient help himself? How far should he be helped? Should two nurses work together?
   b. The student nurse's energy as it relates to herself, her health, and her reserve for other patients. When should she request assistance in lifting, etc.?

[1] Stewart, Isabel: "Possibilities of Standardization in Nursing Technique," *The Modern Hospital,* June, 1919, Vol. XII, No. 6.

5. The economy of time:
   a. In relation to the patient cared for: Is time of importance to the patient? Has the time taken (in bathing for instance) any effect on his energy or comfort? If time is available could it be used to better advantage for the patient?
   b. In relation to the nurse, her responsibility for the comfort and welfare of other patients, attendance at class or elsewhere, other responsibilities, and the need of developing habits of promptness and precision, using time to advantage in studying the needs of the patient —reading chart, history and laboratory reports, etc.
6. The economy of materials:
   a. In relation to patients: Torn linen, stained linen, blankets, mattresses, chipped dishes or utensils, broken furniture, lost articles, etc., all add to the discomfort of patients and sooner or later result in poor service.
   b. In relation to the nurse: Improper, inadequate equipment makes good nursing extremely difficult and therefore difficult to develop proper ideals, standards, and methods.
   c. In relation to the hospital and community: The resources of the hospital and community entrusted for improving the conditions and the welfare of patients are depleted by lack of economy.
7. Artistic, finished appearance of work:
   a. In relation to the comfort, mental and physical, of the patient cared for.
   b. In relation to other patients and the ward in general.
   c. In relation to the reputation of the hospital and school of nursing in the community.
   d. In relation to the education of the student or students.
8. The simplicity of the procedure and its adaptability to new situations, such as the home, are criteria for testing our methods of procedure.

REFERENCES

CHARTERS, W. W.—*Curriculum Construction (See bibliography contained).*

KILPATRICK, W. H.—*Source Book in the Philosophy of Education (See bibliography contained).*

SECTION III

METHODS OF TEACHING

What Is Teaching? — Teaching is the *art of helping* students to help themselves. It is based on a sympathetic understanding of the needs of the person taught; a spirit of comradeship, the ability to see difficulties and problems from the student's point of view, and the attitude of a fellow-student (older and more experienced) in meeting and solving problems with the students and enjoying the rewards together.

It does not mean reading, studying, thinking, organizing material, planning work, being responsible for, or doing things for students which they can do for themselves. It means everything that we, the teachers, *are*—our ideals, purpose and philosophy of life, our interests, tastes, ideas, attitudes, and appreciations; and everything we *do* which influences the students' development—the atmosphere, environment, and situations which we help to create around them; the example we set of an alert, inquiring, thoughtful, well-informed mind; a mind critical but broad, generous in its interpretations, with the creative imagination which sees the significance and possibilities in signs and symptoms observed, and in facts and situations which otherwise appear uninteresting, mechanical, monotonous routine. It means, also, seeing the possibilities in our students, directing, guiding, and stimulating them to their highest endeavour and leading them on to become purposeful, independent workers, capable of overcoming difficulties, recognizing and solving problems by themselves, sharing in the responsibility of rendering the best possible service to their patients and by so doing contributing to their own learning and development.

Preparation of the Teacher. — To accomplish the above, a teacher would have to know her students well—their previous education and experience, their capacities both physical and mental, their interests and appreciations—æsthetic, intellectual, and social. She should, also, not only know her subject well (which includes a knowledge of both the difficulties and opportunities of teaching in the wards and clinics, etc.) but should be on hand in the wards, either personally or through her assistants, to help the students solve difficulties and problems as they arise, in other words, when they, the teachers, are actually needed. Otherwise students not only forget what they are taught but they fail to bridge the gap between classroom and ward, between theory and practice, and there is danger of setting up conflicting standards of what is acceptable in the classroom and acceptable or permissible in actual practice or experience.

A working knowledge of the principles and methods of teaching is highly desirable, and added experience in the various fields (especially in community health activities) for which the students are preparing will be found extremely helpful and, perhaps, almost essential in order to properly interpret the needs of the patients.

Classroom Teaching. — To discuss the classroom in full, its equipment and preparation, etc., would require more space than the scope of this present pamphlet permits. In general, it may be said that the hygienic conditions, atmosphere of comfort, attractiveness, system, order, efficiency, the equipment and method of work and study should all be such as to establish those ideals, standards, attitudes, and habits of thought, feeling, and doing which we feel desirable. The class situation presented should be that of a social group engaged in purposeful activities (individually or in groups) in a natural setting; that is, a classroom which reproduces the ward as far as possible not only in equipment and methods but in student activity and responsibility, thus enabling the students to adjust most readily to the ward, clinic, or home.

The class arrangement has much to do with successful teaching. The teacher elevated on a platform, the students seated with their backs to each other are not conducive to free interchange of thought or discussion, or to the feeling of sharing in the solution of problems or in rewards common to the whole group. A satisfactory arrangement is to have the students seated (comfortably for writing) in a semi-circle or on three sides of a rectangular table or space so that they all see each other, as well as the teacher, the board, and the demonstration, etc. It is not necessary and is, in many respects, even undesirable, that the classroom, in order to have students readily adjust, should be an exact reproduction of the wards. Even in the same hospital, wards often vary. They are often not suitable for classrooms in size, shape, and general arrangement, or in the amount and distribution of equipment, or in the size and location of linen rooms, utility rooms, or kitchen. When planning a classroom laboratory for teaching dietetics no attempt is made to exactly reproduce a kitchen. The purpose of the room, the necessity of having a number of students frequently engaged in the same thing at the same time, the necessary provision for demonstration, practice, and supervision (with ease in changing from one to another), and constant need for and emphasis on the principles of economy of time, energy, and materials are all factors which should receive careful consideration in planning and equipping a classroom whether it is to be used for the teaching of dietetics or the principles and practice of nursing.

While it is important that the students learn, in the classroom, what good nursing really is, it is, on the other hand, poor teaching, and fatal to the morale, if the equipment and methods used and the standards set are not such as we have a reasonable hope of attainment in the wards. At least a minimum standard should be set and maintained in the wards and the students constantly made to realize how, why, and to what extent it may fall short. For instance, we may feel it desirable and strive to bathe patients, change the linen more frequently, and give more hours per day of nursing service to each patient than

conditions, at present, permit. This temporary failure should not lower our standard, but the difficulties should be accepted by all as a common problem to solve. In this way, by constantly testing and striving, students learn to plan their work and develop good judgment, a sense of responsibility and of relative values in all matters concerned with the safety and comfort of patients, the economy of time, energy, and materials, and the artistic finished appearance of their work.

This feeling of consciously striving for better standards, no matter how near we may seem to approach perfection, is, in itself, a very desirable habit to inculcate.

Methods of Teaching Based on Laws of Learning

We teach only in order that students may learn. Our methods, therefore, will meet with success only in so far as they are in accord with the laws which govern the process of learning. And although we may feel that conditions make it almost impossible to obey these laws yet the laws themselves, like all laws, remain true and unalterable, whereas conditions and methods which interfere may be changed if we consciously and constantly strive in the right direction and know wherein we succeed or fail.

The Laws of Learning formulated by Dr. Thorndike are as follows: 1. The **Law of Readiness, Mind-Set-to-an-End, or Purpose:** *When a bond is ready to act, to act gives satisfaction and not to act gives annoyance; when a bond is not ready to act, to be forced to act gives annoyance.* The condition of readiness means "the degree of stimulation needed at any given time to bring about a given response, the greater the readiness, the less stimulation is needed." Mind-set refers to one's whole mental attitude toward a particular person or thing. This set acts as a controlling interest and purpose which "takes possession of the mind" at the time and which "makes more ready all one's inner resources (response bonds) that by previous inner connection seem pertinent to the activity at hand." "Simultaneously, this set also makes unready all those response bonds

whose action might interfere with attaining the end in view." This law emphasizes the importance of having a definite, abiding, and worthwhile purpose, and one strong and earnest enough not to be turned aside by difficulties or annoyances in the way. We instinctively recognize this when we ask students to state why they wish to study nursing.

This law endorses the following methods previously suggested: The *psychological* order of subject matter *vs.* the *logical* order; that is, lessons arranged according to the interests and needs of the students as difficulties, or problems, and opportunities for learning arise in their practical experience, instead of dividing the subject matter into lessons, the number and content of each lesson depending upon the hours devoted to the subject, and the sequence being merely from the simpler to the more complex duties; or based merely on any other logical arrangement such as all the baths, or all the enemata, or all the cold or hot applications regardless of whether or not such instruction relates to the student's present interests, purposes, or needs.

The practice of correlating the lessons in practical nursing with other subjects, such as anatomy, physiology, chemistry, etc., is in accord with this law. The practice of dividing the course into preliminary and advanced nursing, and into nursing related to various branches such as medicine, surgery, etc., is in keeping with the principles of proceeding from the simpler to the more complex and from the known to the unknown, and (while capable of retaining the advantages of systematic, logical order) is, at the same time, psychological in arrangement, in that it makes the correlation of theory and practice possible. Within each of these divisions the order of presentation should, of course, be psychological.

This does not mean that only such principles and problems would be discussed and only such procedures taught as actually arose in the ward at the time but that such actual problems or treatments would be the starting point, the *occasion* for building up a systematized, organized knowledge of related duties having a similar purpose and based on common principles. For instance,

a cold sponge ordered, or the presence of a patient likely to need a cold sponge, might be the occasion for teaching the principles of cold applications and other treatments based on the same principles. A cleansing enema, however, would not be the occasion for teaching a nutrient enema—other principles are involved, the purpose or effect desired and therefore the method of giving are different. It is possible that a nutrient enema required might be the occasion for teaching a cleansing enema (if not already taught) because the one is often of no effect without the other.

A practice related to the above is that of teaching the individual student in the wards (provided she can be properly taught and supervised) nursing measures when their use is apparent; that is, giving the student complete care and responsibility for her patients—the "case method" of assignment. An important principle to remember in giving any assignment—lesson, patient, or treatment—is that it must not be too difficult either to comprehend or to do satisfactorily. Interest, desire, and need may be present, but if too difficult or too early for principles to be understood, then the resulting discouragement and dissatisfaction will almost surely inhibit future interest and learning. For instance, in the opinion of the writer, such treatments as a catheterization or the administration of medicine, should not be given early in the course because of the possible danger to the patient and the principles, skill, accuracy, and precision required. Cystitis resulting from faulty technique or a serious result due to an error in giving medications would almost surely cause a conscientious student discouragement, remorse, and lack of self-confidence which would undoubtedly react unfavorably on her future learning not only in relation to the above procedures but to her whole experience.

Any method which arouses interest, a plan or purpose, or desire to learn (such as a demonstration skilfully done, a reference to or quotation from a book, early contact with the wards, encouraging observation of patients, and of skilled work done by older students, assigning patients in advance for the purpose

of study and planning nursing care, giving long-term assignments as in dividing the course into topics and sub-topics with references, suggestive questions, projects and methods of study, etc.), is in accord with this law.

The whole project method of teaching (discussed later) is based upon and is in accord with this and the following laws.

2. **The Law of Effect**—the **Law of Satisfaction (or Success) and Annoyance (or Failure)**: *"A modifiable bond is strengthened or weakened according as satisfaction or annoyance attends its exercise."* "The fastest learning, other things being equal, is where both are used; satisfaction when they go right, annoyance if they go wrong."

This means that the satisfaction which comes to students from seeing, hearing, reading, or doing something which fits in with, or helps them in what they have planned and purpose doing, and the satisfaction arising from the success likely to follow whole-hearted interest and effort not only stimulate the learning process but are necessary to it.

Dr. Thorndike states in this connection that the discipline from enduring the disagreeable seems far outweighed by discipline from working with interest along lines that fit one's abilities.

This law emphasizes the importance of having definite, concrete ideals and standards whereby not only the teachers may measure, reward, or redirect the students, but by which the students themselves, by self-testing, may find a personal satisfaction (or annoyance) and develop the qualities of self-responsibility, self-reliance, and the capacity for self-direction. These standards or measuring rods should not be stored away to be brought out on special occasions, such as examinations at stated intervals, but should be in constant use, a part of one's mental attitude, functioning actively, as it were, like one's appetite which tells normal individuals when they need food, what kind of food, when they have had enough, and whether they are satisfied or dissatisfied.

The standards should be *posted* and *used* constantly in the

classroom to measure and weigh each step in a procedure, each principle and attitude, etc. The same standards should likewise be posted and used in the wards and clinics.

3. **The Law of Exercise (Repetition) or Use and Disuse** states "that within limits the more often a response is made to a situation the closer becomes the bond connecting the two; that is, the more surely and smoothly is the response made when the situation presents itself."

"Within limits" means that there are other determining factors in the learning process besides the *number of repetitions.* The first is the *intensity* of the exercise or experience—the degree of interest, of surprise or variety, and absence of monotonous routine, the significance or worthwhileness of the exercise or experience, and the setting or the time, place, and conditions under which performed.

A second important factor is *recency* or interval in time and space between the practice, repetition, or experience. This determines whether the association or habit will be "fixed," in other words learned, or not. A very important factor in the formation of habits is the *Law of Effect;* the practice or repetition must be accompanied by conscious improvement, merited reward, and satisfaction. If the need for practice or repetition is not felt, or if (because of lack of appreciation or of proper direction and guidance) the repetition brings no conscious improvement or reward; or if carried on with fatigue, discouragement, or dissatisfaction, the habit formed will be one of dislike and avoidance—the mind becomes "set" against it with resulting failure to learn anything by it.

It is evident then that this law with its modifying factors, needs very careful consideration and application in teaching and learning when *skill* is one of our main objectives. Moreover it applies equally to the formation of habits of keen, discriminating observation; to habits of *thinking* (reasoning, analyzing, organizing, planning, applying principles, using imagination, initiative, and good judgment in solving problems independently or in groups); and to habits of *feeling* (attitudes, appreciations,

standards, qualities of heart and mind). It is these standards and qualities which should make the students, by their own self-testing, *feel the need of practice;* and such measurements determine when drill is needed, how much is needed by the individual student and the group, how much should be practiced in class periods or in free time, and whether in the classroom or in the wards.

Practice Preceded by Teacher Demonstration. — In addition to the feeling of need, of readiness and mind-set, the students, before practising, should have a clear aim, definite directions, and an accurate understanding of what it is they are trying to attain. Accuracy, both of the idea or principle involved, and of execution, is very necessary. For this reason a *demonstration* complete from start to finish should always be given by the teacher so that the students may have a clear image of the whole process before attempting to practise it. Otherwise they form inaccurate ideas and bad habits. The demonstration may be repeated if the students desire it, first having them state which steps they particularly wish emphasized. The first practice by the students, because of the law of recency, should immediately follow the demonstration. During practice, emphasis (law of intensity) should be placed on the more difficult parts, practising them the greater part of the time. For instance, in learning to make beds, students should not "just practise beds for an hour," as they say, but, having made a bed, should turn a critical eye over the whole process and the finished product so as to know just what they hope to improve and how to go about it, in making the next bed.

Amount of Practice Based on Need and Individual Achievement. — As stated previously, this will be determined by standard measurements and the felt need for practice. It is here, as well as in regard to study, that work on an individualized basis becomes desirable and necessary—some students will have to study or practice much more than others to reach the same standard or level of achievement. It is advisable that classroom time be used until the students have the *right idea and*

method. Then they may be expected to practise in their free time individually or in small groups organized on a basis of ability. A minimum amount of practice (in terms of *number* of beds, etc.) may be set for all, otherwise the amount being determined by their level of achievement. *A natural setting for practice,* that is, a real purpose, is always desirable. The needs in the wards, for instance, give ample opportunity to all for practising beds, and the students have the satisfaction (with all its fruitful results in learning) of doing something worthwhile and useful to others. At the same time, by observation, by contact with others and the needs of the patients they are developing a mind-set-to-an-end. All such treatments, or steps common to a variety of treatments, which we know will have ample use and practice in the wards, need less practice in the classroom insuring, of course, that students have the correct idea and method and can have adequate assistance or supervision.

Such treatments as cupping or bladder irrigations, while they form part of the course, may be used infrequently in the wards. More time will need to be given them in the classroom, part of the function of the classroom being to round out the experience, which varies in amount and variety, in the wards. The *occasion* for teaching may be the need felt in the experience of, perhaps, only one student but the opportunity should, if possible, be extended to all. Again, we cannot always be guided by what is used in any one hospital. For instance, mustard pastes and flaxseed poultices are not used at all in one hospital known to the writer, but are used in many others, as well as in the community, so it would not seem fair to allow students from any hospital to graduate without knowing how to make and apply pastes and poultices.

The amount of time spent in practice in the classroom is often, in the opinion of the writer, out of proportion to the needs of the students and the difficulty of the procedure. For instance, much time is often spent in practicing making beds while a limited time is spent in such measures as draping patients for

various examinations; although the latter is difficult, not only because of the personal element of patient and doctor, the variety of positions and methods, the promptness and skill required, the uncertainty as to just what is likely to be required, but because the particular draping may be required only infrequently. The habit has not time to be "fixed" and we get "out of practice" when the intervals between instruction, use, or practice are prolonged. Until habits are firmly established the intervals at first should be short, then gradually lengthened.

The *law of intensity* is an important factor in fixing or in remembering, which partly explains why things taught and learned in the wards, where the happiness and lives of human beings are at stake, make such a lasting impression. It is not unusual, for instance, for a student to feel faint at the first sight of a very painful treatment, the intensity of the impression being so great. Experience in the wards is full of intense, vivid impressions including the intense satisfaction which comes from the ability to relieve suffering and to actually render help to some known or present individual.

In this connection it is important to remember that fatigue from over-study, from the emotional strain (more or less constantly present when surrounded by sickness, worry, and sorrow), from over-practice, and from monotonous routine (when carried on at the expense of aims and standards) has the directly opposite effect to intensity; that is, it greatly inhibits the process of fixing, remembering, or learning. This should be carefully considered both in the classroom and in assigning duties in the wards.

The Law of Association is closely akin to the Law of Exercise and states that, in teaching, we must put together those things which we wish to go together. If we wish certain ideas or feelings to be associated in the mind, that is, to form habits of thinking or feeling; or if we wish certain thoughts and feelings to be associated with and control bodily responses or conduct, then we must teach them together remembering the importance

of repetition, intensity, recency, and satisfaction as illustrated in the following:

Teaching Principles. — If we wish students to understand and apply the principles underlying any procedure or nursing measure we will teach them together so that they will always function together. For instance, in teaching how to boil a rubber rectal tube we will teach the method of boiling *rubber;* that is, the facts common to *all* rubber, in other words, the *principles.*

Teaching Skill. — If we wish students to become skilled in nursing procedures we will teach the elements which go to make up skill; that is, *form* and *execution,* the presence of the first factor only entitling it to the rank of *art* and giving us the right to speak of the *art of nursing.*

Form or *style* is defined as what the individual does deliberately to influence movement—thought or feeling is associated with the bodily response, in past experience, and controls it. Hence we say, she plays the piano "with expression" or has "good form" in playing tennis, or "style" in writing or in dressing, or intelligence, skill, and sympathetic understanding in nursing.

The *value* of form or style is that the consciousness or presence of form not only gives æsthetic pleasure but the thought control upon which it depends is what makes it capable of attainment and development and also capable of the form or skill being transferred to other things and to other people. For instance, if in practicing beds one should notice that a student's movements are awkward or if she herself feels strained, one would be unable to help her unless one could analyze the process and show her which positions or movements are causing the awkwardness and strain. Without this ability to analyze, to get the right idea or thought control, one would have the same difficulty in overcoming strain or discomfort in a patient and, also, of teaching students how to do so.

The *principles of teaching form* are those indicated by the Law of Association and of Exercise, the important principle being to always associate the right idea with the muscular act—the thought with the deed. Mind-set and the law of

effect play their important part here as in other forms of learning.

Execution, on the other hand, is merely a mechanical movement with little thought, and therefore little control, involved. It is defined as merely forming the right connection between the stimulus and the response or movement. It is the *how* of doing things, the factor in skill which, perhaps, we have mostly stressed in the past—not that it needs less emphasis in future but that form, the other factor, needs more.

The *principles of teaching execution* are also indicated by the above laws, the emphasis being on practice—the try, try again—regarding those factors which make for success, discouraging and eliminating those which hamper and annoy.

It must be mentioned here that teaching form, getting the right idea, does not mean making studied movements. Watching the hands or feet, all forms of self-consciousness should be avoided, attention being centered on the thing to be done and the results.

Teaching Standards. — If we wish the students to understand and use standards in testing and evaluating their knowledge, work, or skill, then each thing and each step in a procedure must be measured by its effect and due regard for the safety and comfort of the patient, its therapeutic effect, the economy of time, energy, and materials, the finished appearance of the work, and the adaptability of the procedure to other situations, etc., in order that they may build up the proper associations and have practice in doing it.

Teaching to Think. — Thinking is defined as the method used to direct and control the course of our experience so as to attain the desired result whether it be character, knowledge, or skill. It implies mind-set, interest, concern, responsibility for the outcome. If we wish our students to learn to think we must provide such practice as analyzing situations or facts into their elements, as in associating cause with effect—through the observation of symptoms, the effects of drugs or treatments, the study of the cause of their own success or failure in getting results

desired in a given treatment, or in planning their work and study as a whole.

Such questions as the following which ask *why* and *how* give practice in thinking: 1. Why is an accurate taking of the pulse a valuable source of information concerning a patient's condition? 2. How would you avoid increasing shock following an accident, or an operation? 3. Why would we expect an increased rate of respiration in pneumonia; a decreased rate in diabetic coma? 4. How may a nurse increase the amount of food eaten by a child who does not eat enough food? 5. Why does a patient suffering from pleurisy usually lie on the affected side? 6. Why do we apply an ice cap to the head when giving a body hot pack? 7. How may a nurse measure the efficiency of a treatment she has given? 8. Why must we keep a child, suffering with Potts' disease, in his shell, when giving the necessary nursing care? 9. How would you prepare for an operation in the country where there are no hospital facilities available? 10. Why is the use of a hot water bag to relieve pain, in an undiagnosed acute abdominal condition, contra-indicated? 11. How might a nurse's responsibilities in the care of a patient suffering with a communicable disease, differ in a hospital and a private home? 12. How do we determine the amount and kind of nursing care it is desirable to give a patient?

All questions which *centre the thought around the patient* such as *why* a patient will not or cannot eat his breakfast, or cannot sleep, or why he looks or is uncomfortable, etc., and *how* to overcome the difficulty call for and give practice in thinking.

Another method of stimulating thought, discussion, or debate, is to *repeat to the class general statements* frequently made and believed by many to be true, such as: 1. Frequent bathing, more than once or twice a week, is injurious. 2. Drinking ice water before meals is injurious. 3. Drinking tea or coffee is injurious. 4. Candy for children is injurious. 5. Cleansing the mouth and teeth are unnecessary because Italians have beautiful teeth and do not cleanse them as we do. 6. Hot drinks after

operations are better than cold drinks. 7. Always avoid turning a patient more than necessary. 8. Early to bed and early to rise make a man healthy, wealthy, and wise. 9. Square corners in bed-making are better than envelope corners. 10. Practice makes perfect. 11. A workman is known by his tools. 12. Cold night air is injurious. 13. Flowers in a sick room at night are injurious. 14. A change (such as from ward to classroom) is as good as a rest. 15. A bed with a patient in it can be made more quickly than an empty bed.

Teaching Qualities of Heart and Mind. — The same laws of learning hold true for all the abstract qualities, such as loyalty, imagination, sympathy, kindliness, initiative, altruism, adaptability, judgment, self-control, etc. These should be analyzed and explained by attaching or associating them with as many, varied, concrete illustrations or examples as possible. In teaching procedures, for instance, the students should be encouraged to give (in addition to facts, standards, etc.) examples of conduct relating to it which would show adaptability, good judgment, initiative, sympathy, etc. For instance, in making a bed a student can learn adaptability, consideration of the needs of others, good judgment, and self-reliance in deciding how much clean linen to use for her patient. If, however, the headnurse tells her always just what she may use, or there is a routine which regulates what is used and the linen closet locked and the key kept by the headnurse, then the student can learn none of these self-directing qualities. The conduct of students both in the classroom and in practical experience offers many such illustrations and will show many more with conscious application of the Laws of Learning to their development.

The Project Method in Teaching and Learning

This method is, according to modern thought in education, an ideal (at least for certain subjects) which we should strive for, because it is based upon and is in accord with the Laws of Learning.

A **project** is defined as a *purposeful activity carried to completion in a natural setting.* To our students who have *chosen* the profession of nursing, the whole course is a project. They have come with the *purpose* of learning to nurse and expect to learn by actually taking care of patients in the hospital. The students have a purpose, everything they do is for a purpose having a social value and use. The setting, therefore, is natural, the students learn by doing and have all the satisfaction of seeing the results of their activities.

This whole or larger project may be broken up into smaller and smaller projects, the patient being the centre of interest, in each project, around which aims, principles, methods, skills, knowledge, standards, and attitudes, etc., revolve.

Dr. Kilpatrick has given the following classification of projects which can be readily adapted to our course in nursing as illustrated below; other projects will readily suggest themselves to teachers and students.

1. The **Producer's Project.**
2. The **Consumer's Project.**
3. The **Problem Project.**
4. The **Drill or Specific Learning Project.**

1. **The Producer's Project,** in which the purpose (student's purpose) is to produce something, as in the following: 1. Preparing a *plan of daily nursing care* for each patient, giving observations, readings, and references (such as anatomy, physiology, psychology, pathology, the medical history, and community health reports, etc.) which explain the plan. Such a project gives practice in applying knowledge, in thinking, reasoning, and planning, as well as developing such qualities as initiative, judgment, and a sense of responsibility. 2. *Carrying out the actual nursing care* of the patient based on such a plan or purpose, the plan being modified as the daily needs of the patients indicate and the student being responsible as far as her capacity as a student will permit. In such projects the students may build up associations previously emphasized such as the relationship of cause and effect, etc. 3. *Each procedure or duty* may form a

simple project if prompted by a purpose and a sense of responsibility for the result—not just carrying out an order. 4. *Planning, preparing, and serving diets* based on the nutritional needs of the patients; or planning, serving, and encouraging a patient to eat and enjoy his meals when the nature of the disease, loss of appetite, likes and dislikes, mental depression, or racial habits make this a difficult problem. 5. *Group project*—the preliminary group may accept the responsibility of arranging with the head-nurses, through a committee, and organizing their group, to make all the empty beds for a certain period, or for giving a certain number of baths, etc., correlating with the instruction and practice in the classroom. 6. A complaint from the laundry of excess laundry, or stained linen, or of articles received, such as instruments, pillows, etc., which should not be sent down; or complaints of food wasted, thrown in the garbage, and similar problems may be the occasion for a group project to solve the problem. 7. A study may be made by one or more students of a variety of patients all suffering from the same disease, such as cardiac disease, diphtheria, diabetes, etc., in order to formulate the principles of nursing care for such diseases. 8. A group of students may work out the best way of setting up and using various trays, or of serving meals hot, attractively, on time, etc., or a system of giving and checking medications, or of working out the ward time slips or assignments for a day or a week so as to give the best care to the patients and the best experience for each student. 9. A student may make a visit to a patient's home (under proper direction), or to an interested social agency, or to a district from which her patients come or go, in order to better understand her patients and their needs. 10. A group may make a survey of the hospital, the health and social resources of the city, study the hospital report and reports of vital statistics with a view to understanding the community needs and the school and hospital relationships. 11. Keeping various records such as charts, case studies, note books, personal health records, a scrap book of clippings or reference readings, etc., and oral or written reports of visits and surveys. 12. Making a plan of the day's work, week's or month's work as a whole including the course of study.

13. An expected visitor or a need felt in the hospital or by the students themselves may be the occasion for a review demonstration planned, organized, and given by the students.

We may illustrate by outlining the last project as actually carried out by a group of students.

A Group Project

Project. — The students in the preliminary or pre-clinical group had been in the wards for a short period each day serving the patients by making beds, giving morning and evening care, making them comfortable in various ways, helping to serve and feed their patients, and various other measures taught in the preliminary course.

While doing so they daily encountered difficulties and problems which, when discussed in class, were found to be fairly common to the whole group. Many of the difficulties were due to inexperience and failure of the students to adjust to the many, varied situations presented; some, however, were due to conditions over which the students had no control, such as lack of system in planning, assigning duties, giving adequate directions in assignments, and in general lack of leadership; some were due to inadequate individual equipment, and to such problems as lack of linen, torn linen (revealed on unfolding), or to lack of judgment in the use of linen or supplies; some were due to unnecessary interruptions during the treatment being given. The problem which seemed to give the deepest concern and was mentioned most frequently was the fact that there were so many different groups—headnurses and affiliating students from different schools and students in the home school taught by different instructors—each having a different method and different standards in nursing, all of which made it very confusing and difficult to measure up to standards which they desired.

The students were finally asked whether they (teacher and students) as a group could do anything to help solve this problem and, if so, what were their suggestions. Among other useful suggestions given, one was that we give a demonstration show-

ing how the students were being taught and the standards they were expected to maintain in the wards.

The teacher noticed that, while some students looked eager and pleased, a few looked rather dismayed. She, therefore, expressed her appreciation for the suggestion and enthusiastic interest in the worthwhileness of the project and also her complete confidence in the ability of the group, stating that she had often been amazed at the executive ability and versatile talents displayed by, not just a few members of a group of student nurses but by all when giving a "stunt" party, an entertainment, or play.

The group were asked to get together and think it over, the teacher warning them of difficulties ahead (such as the importance of demonstrating a skilled, finished piece of work, accurate in every detail, and the amount of time which would be required for planning and practice with an already heavy program) and stipulating that, if they planned to give it, the whole group must be united in feeling and purpose and all must share in both the planning and the demonstration.

The following day, a committee came to the teacher with a tentative plan, stating that they had all met together the previous evening and had formed their committees with duties assigned and drawn up the plan which was in the form of a three-act play with certain features "to give the necessary touch of humour."

The plan was accepted, the teacher giving a few suggestions and expressing confidence in their good taste and judgment in avoiding any reference which would cast any reflection on the work of any other group or person, or cast any shade of displeasure over the evening's enjoyment, its whole purpose being to create harmony and not disharmony.

The students were told to go ahead with their plans, the teacher assuring them of her interest and desire to give any help which they felt necessary. The next few weeks went uneventfully by and the teacher, somewhat concerned, heard nothing further about the demonstration, but restrained her anxiety to make inquiries which might seem to show lack of

confidence and so spoil everything. However, as the date set and the Christmas festivities were both approaching and might interfere with each other, the students were told the demonstration might be postponed. They were very disappointed as they were bringing the Christmas spirit into their play so plans were resumed.

Very soon representatives from different committees came to ask permission to have or to do certain things but the students themselves made all the arrangements, carrying everything to the hall they selected, except things too heavy for them to move, and in everything took complete responsibility.

Posters designed and prepared by the students were posted in good time. The program given below was prepared and typed by the students themselves and there were plenty of them. A rehearsal of the play was given on the evening preceding, to which the superintendent and teacher were invited.

"Daughters of Eli"

wish you

PLEASANT DREAMS

in

Prologue and Three Episodes

— 1 —

PICTURES AND MEMORIES

Florence Nightingale — Period of 1872

Sairey Gamp — The Henry Street Nurse

— 2 —

A NIGHTMARE

Difficulties and Problems in Ward Adjustments

— 3 —

THE SUPERVISOR'S DREAM

"Each bit of work you do is someone's dream"

Demonstration

by

Pre-clinical Class, Yale School of Nursing

Chapel — December 23, 1924

DEMONSTRATIONS

(Group 1)

A. Open bed
   Arranging and dusting unit
B. Closed bed
C. Ether bed

(Group 2)

A. Care of hair
   Larkspur cap
   Shampoo
B. Morning care
   Mouth
   Bath
   Bed
   Hair and nails
C. Cardinal symptoms
   Evening care
   Mouth
   Face and hands
   Back
   Bed
   Hair

(Group 3, Part 1)

A. The recumbent patient
   Turning
   Lifting
B. "Sitting up" in bed
   Back rest
   Gatch bed
   Use of pillows
   Tray or table
   Footstool
   Fowler's position
C. Removing pressure, weight, and friction
   Leg support and sandbags
   Cradle
   Arm support
   Air cushion
   Cotton rings
   Pads

(Group 3, Part 2)

Changing mattresses
Two methods
Bed transfer
Wheelchair

The demonstration, itself, was conducted just as a play—someone at the door, programs given out, ushers to escort to seats, music between the acts and during treatments which tended to be rather long with no explanations or speaking required. Each student took part in several events, including her turn or turns when not on the stage at managing the curtain and the music—a gramophone. It would be impossible to describe all the features which made the evening such a complete success for students, teacher, and audience. That the students were interested, that they had worked together as a group, that they had executive ability and the will and ability to solve problems by themselves in the face of many difficulties, that they had worked and practiced unsparingly in a whole-hearted way, that they had a sense of responsibility, taste, good judgment, and a sense of humour which could be relied upon and that they had been keenly observant and alive to the needs of the patients in the wards, to the many difficulties and problems, and to the great opportunities as well as to their own inefficiencies were all evident in the good team work, thoroughness, and attention to detail displayed, the situations presented, the hidden talents and thoughts revealed, and above all in the delight of the audience—it all appeared so absolutely true to life in the wards.

The students themselves felt on reflecting over the performance that it was a little too long and that another time they would not try to show so much. One student had deliberately taken a little longer (five minutes) for her treatment than the time allowed her, in spite of anxious protests from the wings, because she had a feeling that the appearance of haste would have a bad effect and was contra-indicated for the comfort of the patient. The class agreed and decided that the fault was in planning to attempt too much.

It was further recommended by the group that the more advanced nursing measures should be demonstrated later and that such demonstrations, to be given when the need suggested, should be an adopted, regular part of our program.

II. **The Consumer's Project,** in which the *purpose* is to use, to appreciate, and enjoy something, the amount of learning in this, as in all projects, depending upon its purposefulness. Examples might be: 1. A demonstration given by the teacher, a student, or group of students in a skilful, artistic manner and *enjoyed.* 2. An inspiring lecture given by the teacher and enjoyed, or a successful class recitation in which the students played the major part and in which their best efforts were developed and rewarded. 3. Satisfaction aroused by a patient who looks happy, comfortable, and attractive as the result of a student's nursing care; or by a patient who shows signs of improvement. 4. The artist's appreciation of a successful piece of work such as an operation or dressing skilfully done, or a wound healing satisfactorily. 5. Appreciation of the devotion of family or friends, especially among the poor, or of the devoted service of a nurse or doctor to the patient. 6. Satisfaction from a procedure successfully done, or the artist's appreciation of a beautifully kept linen room, utility room, kitchen, and ward with flowers attractively arranged and an air of comfort. 7. Satisfaction in making patients happy by meeting their needs—giving an interesting book to read, light congenial occupation, arranging patients so that congenial people will be together. 8. Enjoying an interesting article or reference, or a bedside clinic. 9. Satisfaction from a successful day's achievement and recognition and appreciation of good team or group work in classroom, ward, or in social activities.

III. **The Problem Project,** the student's purpose being "to solve a problem, to clear up some intellectual difficulty." The Producer's Project may include a Problem Project but the emphasis in the former is on the doing and the thing done, whereas in the latter the emphasis is wholly on the intellectual factor in solving the problem. Such projects would include:

1. Problems in making solutions and in preparing drugs. 2. Calculating and planning special diets. 3. All forms of study if purposeful. 4. Thinking through difficulties such as getting children or adults to eat and drink; behaviour problems in children, problems in mental nursing, putting patients to sleep without narcotics, preventing bedsores and constipation, etc., the modification and adaptation of procedures, etc., to meet special needs such as conditions in the home. 5. Formulating principles of nursing by applying a scientific method to the study of procedures such as the various types of irrigations, baths, hot and cold applications, methods of cleansing and sterilizing articles, and to methods of preventing cross-infection, etc.; or to the study of special problems in nursing (social, mental, or physical) and to special types of disease; or, in the preliminary course, to the study of a hypothetical case as outlined below:

Project Developed by the Preliminary or Pre-Clinical Group. — Toward the end of the pre-clinical period, the attention of the students was called to an article which stated that, by applying the scientific method to the study of health and the causes of disease, greater strides had been made in the last seventy years (the period during which it had been applied) than in the previous two thousand years.

The students were asked whether this statement suggested anything to them. To some it suggested little but others asked if this method could not be applied to nursing and, if so, would it not have the same result in nursing as in medicine and other fields. It was felt that before answering this question we would have to find out what the method used really was. The students were asked if, in their studies in the various science laboratories, in the wards, or in their reference reading, they were conscious of a definite method being used. They were asked to think about it, and also to read the chart of a patient in the ward, and a social case record prepared by a social worker in see if the method used by the doctor or the social worker in making a diagnosis (and prescribing treatment) was the same, for instance, as that used by the bacteriologist in finding out

the kind of bacteria, if any, in a given specimen of sputum. They were to be prepared to discuss this in the next class with a view to analyzing the steps in the method or process. References, including a study of their own laboratory notes, were mentioned. The findings and questions of the group were discussed in class, charts were read and discussed, and the steps in a scientific method of study were finally outlined.

The problem then before the class was to answer the question raised by the class as to whether this scientific method could be applied in the study of patients for the purpose of prescribing the nursing care for each patient, based on his individual needs, as clearly and scientifically as medical care is prescribed.

It was felt, the teacher said, that at present our content of nursing knowledge and our nursing program tended *on the whole* (with, of course, exceptions) to be too general. For instance, the nursing program in a ward may state that *all* patients must have a bath on admission, head washed and fine-combed, etc., and all must have at least two baths a week; that *all* will have the same number of meals, much the same menu (unless otherwise ordered), the same fluids, at the same hour; that *all* will have evening care at the same time and the same method of morning and evening care is given for all; that *all* patients will have a rubber on the bed regardless of their condition; that *all* the curtains should be at the same height, *all* beds, tables, chairs, etc., be in the same position, that *all* be dressed alike, that *all* have visitors at the same hour; that *all* patients will be ready for "rounds" at a certain hour, etc.

It was stated that while much, if not all, of this uniformity was desirable, the point was that it was not *all* that was desirable and necessary. It is, as it were, nursing in the gross, the resulting tendency being that, having given a patient morning care and breakfast, no further attention, unless prescribed by the *doctor,* is often thought by students to be necessary until lunch; and, having given lunch (regardless of how much or little he ate) no further thought is given until supper, and so on. Whereas what is needed is a program of nursing for each patient,

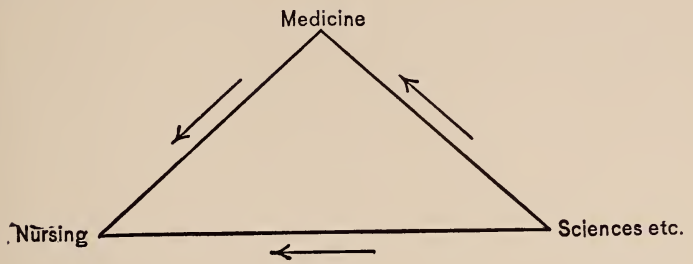
for each day, and for all day just as doctors study and prescribe according to the patient's specific needs.

Students who nurse *patients* instead of *a* patient—that is, students who nurse in a routine way, giving much the same care to all patients regardless of their individual needs—do not learn to observe, to think, to discriminate, to judge relative values, to use good judgment, to use initiative, to be reliable, to feel for and to sense the needs of the individual. Because of this tendency, hospitals, doctors, and visiting nursing and public health organizations feel it necessary to make *rules* which apply to *all* cases and to *all* nurses. For instance, that in a children's clinic *all* the children who come to the clinic must be weighed regardless of whether or not the weight were a factor in the disease and regardless of the nurses' valuable time taken in doing it. In a visiting nurse organization it is usual to rule that all post-partum patients be bathed for a certain number of days after delivery regardless of the varying needs and conditions of the patients, although one may be robust and another delicate, undernourished and rundown.

This is not because hospitals or visiting nurse organizations desire to make rigid rules—such rules grow up largely because mistakes have shown that thought and good judgment on the part of the nurse cannot always be relied upon. Rules in the form of directions are, of course, necessary, but students must be taught and must learn to think, to discriminate, and to use good judgment in interpreting and applying such rules to meet the needs of the individual.

Another statement made was that we should make a better use and more direct application of the sciences, and other subjects taught, in developing our plan of nursing care which, it was felt, could, in part at least, be developed from such knowledge. For instance, should the following diagram show the correct and most fruitful relation between the basic sciences, medicine, and nursing? That is, while medicine draws directly from and is dependent upon the basic sciences, and nursing draws from medicine, should not nursing also derive its facts,

principles, methods, spirit, and imagination directly from science?



The problem then before the class was to find out, by study and experiment, whether this scientific method could be applied to nursing and whether by so doing a definite organized content of nursing knowledge could be built up as had resulted in medicine and other fields.

The class was then asked to mention cases or conditions they would like to study. Hypothetical or imaginary patients were chosen because the present aim was to emphasize the use of a *method* and the direct application of facts and principles from the sciences, the principles and practice of nursing, and other subjects. It was recognized and emphasized that our plan, of necessity, would be incomplete because of our present limited knowledge and experience and that any plan is only sound and workable (and when dealing with people, justifiable and safe) when based on adequate knowledge, understanding, and thorough testing. The plan formulated would therefore be tentative—this principle being inherent in a scientific method—and would be tested and supplemented later by classroom discussions, medical and surgical lectures, pathology, etc., and by clinical experience in caring for not only one but many patients showing varying stages and manifestations of the same disease.

The first study selected was a patient suffering from cardiac failure. The *problem* was how to make Mrs. ? comfortable and happy and to further her recovery and return to normal living. The problem stated, the *second* step was to gather all the facts from the various resources which would help solve the

problem. For instance, what would a study of the anatomy and physiology of the heart tell us about the effect on the circulation, and on the function of other organs, with resulting symptoms? What possible effect would such a disease have on the social life of the patient—her work or play, her family and the community? What effect would it have on her mental attitude, her interests and use of leisure, and her health habits such as exercise, diet, nutrition, weight, eliminations, and sleep, etc.? What effect would the possible prognosis have on the patient and so on? The *third* step would be to reflect upon the facts revealed—analyzing, weighing, comparing, making inferences, associating cause and effect, and selecting facts useful in solving the problem. The *fourth* step would be to draw conclusions and to formulate a plan of nursing care which would include and provide for all the items mentioned. The *fifth* step would be to apply and test out the plan, verifying, modifying, and adding to it with fuller knowledge and richer, broader experience in the actual care of patients.

Further practice was given in the study of other hypothetical cases such as a patient suffering from disturbed function of the stomach, the intestines, the mouth, the kidneys, the glands, etc. Later studies were made of cases selected, such as patients suffering from diabetes, hyperthyroidism, bedsores, gonorrhea, syphilis, constipation, etc.

The results plainly showed that a scientific method of study could be applied to nursing and that by so doing a definite, organized body of knowledge could be developed.

IV. **The Drill Project or Specific Learning Project,** in which "the purpose is to acquire some item or degree of skill or knowledge" such as attaining a certain speed and accuracy in action, or in mental alertness, in thinking, in making decisions, in figuring, in memorizing, and in keenness of observation.

All forms of practice carried on individually or in groups in the classroom, wards, or in the student's free time would be a Drill Project providing that the students felt the need of prac-

tice and, therefore, had a purpose in doing it. For instance, a standard set by an individual or group to be reached by the end of a week or month would be a project requiring preparation and practice in the student's free time, the amount of practice depending upon the capacity of the individual student thus making provision for this very important factor of differences in ability.

Arranging the course in topics, outlining and posting the content (in terms of knowledge, skills, standards, and attitudes, etc.) to be covered or accomplished by a definite time makes study and practice on an individualized basis possible. By so doing the brighter students are not held back (with resulting loss of interest, effort, and the satisfaction which leads to further effort and learning); or the less alert discouraged by their seeming failure and lack of success, with its resulting interference in learning.

By so doing we shall be able to maintain our high standards for all, but the progress and rate of progress or achievement for each student will be measured not only in relation to this common standard but in relation, also, to capacity which varies with each student.

While it is desirable and necessary to make provision for individual differences in ability, as indicated above, or by dividing a class into sections based on their ability, more emphasis and encouragement should be given to group activities, group projects, and group standards and achievements. For it is only by sharing in the aims, difficulties, and problems of the group that desirable social attitudes and appreciations can function and develop.

Developing the Project. — As the name project implies, the students should, as far as possible, be made responsible and left to carry it out alone. Before doing so, however, the teacher must insure that the students know exactly what it is they aim to do and that (although they know or perhaps *because* they know, there will be difficulties and problems ahead) the whole-

hearted interest of the *whole* group is aroused and not just that of a few stars in the class—in other words, that it is a real student project.

A perhaps equally important factor to insure is that the project fits in with the major topic being studied and that, while difficult enough to offer a challenge, it is not too difficult to be accomplished with success and satisfaction. Otherwise there will be a sense of failure, discouragement, little learning, and fear of venturing on a second project. The necessary resources should be available, such as equipment, references, etc., and the guiding hand of the teacher who, while showing enthusiasm for the project and confidence in the ability of the students, knows when and how to offer help and encouragement. It seems hardly necessary to add here that the difficulty of the project would be considered not only in relation to the student's ability but to the safety and comfort of the patients.

In the opinion of the writer, students should not be given, as a project, the demonstration of a procedure which has not first been demonstrated to them. This would seem unfair both to the student and the class because of her lack of experience and because of the importance of first impressions and the danger of forming inaccurate mental images, ideas, and habits. Students vary greatly in their ability to interpret and form mental images from written or spoken directions of a procedure involving many details, and, in all, such images are apt to be faulty. Students learn best, by seeing and forming a mental image of the whole process, then analyzing into separate steps and focusing attention and effort on the more difficult ones. Seeing a finished skilful demonstration is also more likely to create a desire to imitate, to produce.

Having learned a procedure, a project might be to adapt that procedure to a different situation, such as a different type of patient, or to the clinic, or the home.

In addition to a demonstration the development of a project may call for an inspiring, illuminating lecture by the teacher

to arouse purpose, or to reward and stimulate further effort. Experts in the various topics may be called in such as the dental hygienist on the care of the mouth, the physiotherapist on the massage of the back for comfort, the social worker on the social aspects of admitting or discharging a patient, etc., a nurse proficient in mental nursing on the mental aspects of admitting or discharging, or in special cases such as diabetes, or nephritis. In addition there may be class recitations and drill lessons, all developed in keeping with the project method—purposeful activity on the part of students.

The following description of a method of teaching called *Purposing* is taken from the *Courtis Standard Research Tests* and is highly recommended:

"Class work is markedly divided into phases, part teacher controlled, part pupil controlled. Teacher in control only during periods of stimulation and reflection; pupils in full control during periods of activity with teacher assisting. Pupils' activity consists of the planning, executing, judging essential to accomplishment of purposes. Lessons are set and appraised by pupils. All class work and disciplinary control is almost completely socialized; that is, organized and administered by the group, not by the teacher. Almost no use of questions, directions, etc., by the teacher as a means of recitation. Emphasis is placed on purposes, achievements, standards, ideals, not on results in terms of knowledge and skill. There is no, or very little, learning in the sense of committing to memory except as a means to an end. Much pupil directed reference reading, and much use of rich supplemental material. There is also little organization of subject matter in logical sequence, but order and content of lessons are determined almost wholly by purposes. There is also little organization of subject matter in logical sequence, but order and content of lessons are determined almost wholly by purposes. There is complete acceptance by the children of the teacher as one of the group and almost perfect freedom of expression or of appeals for assistance."

Teaching a Lesson in the Principles and Practice of Nursing

The lesson may be considered under two headings—I. *The Teacher's Preparation of the Lesson*—what and how to teach; II. *The Method of Presenting the Lesson to the Class.*

This may be considered under four headings: 1. The condition or conditions to be met and a clear statement of the problem to be worked out. 2. The underlying principles, causes, and effects to be worked for. 3. The method or procedure which will produce the desired result. 4. Supervised practice in the classroom. 5. The assignment, including theory and practice.

I. **The Teacher's Preparation of the Lesson.** — In preparing the lesson, all the factors mentioned above will have to be considered and provided for. In studying the condition, defining the *problem* and assembling her facts and principles a teacher will draw upon various *sources of information*—her own rich background of experience, text, and reference books, and a study of patients in the wards who are suffering from conditions for which the treatment might be given. The information then will be organized and arranged under headings and subheadings in the order in which they will be used in developing the lesson. The method of presenting or of developing these facts and principles by skilful questions, class discussions, and other means will, also, form part of a teacher's class preparation.

The equipment for the demonstration and for practice should also be prepared and arranged in the most convenient manner and order of use so that both demonstration and practice may proceed in the most efficient way and in accordance with the standards of work set.

II. **Presenting the Lesson**—1 and 2. *Stating the Problem—The Underlying Principles and Effects Desired.* — It is most important that students understand the problem; that is, the conditions which indicate the nursing procedure or treatment under consideration, and the results it is expected to bring about. Such conditions and the results we desire determine our whole

method of procedure and are, therefore, considered in the writer's text book. For instance, prefacing the discussion of the morning toilet, some of the probable conditions of patients in the morning are presented. The same principle would apply in teaching bed-making, or an enema, or a cold sponge bath.

This presentation centres the thought on the patient and guides us in selecting, weighing, and carrying out each step in the procedure by relating it, on the one hand, to the condition and on the other, to the results or effects desired. It develops the underlying principle and gives each step a meaning and a purpose. It teaches students to analyze, to reason, to look for results, and to know how to get them. These principles can be developed by skilful questions drawing upon the student's own experience, the basic sciences, and their text and reference books.

When the nature of the nursing procedure or treatment permits, a real patient is desirable. In any case, the history and discussion of a real patient in the ward, for whom the treatment or procedure will be beneficial, may be taken as the motive for teaching and learning. A broader understanding of the principle may then be developed by showing its use and application in the nursing care and treatment of other varied conditions and diseases. Such cases studied and presented by the students form a basis for a very fruitful class discussion and a rich human background and motive for the demonstration of the procedure.

3. The *demonstration* should be a finished work of art. Certain aspects relating to it have already been discussed. Here it may be considered (taking a treatment to be given to a patient) under the following headings: (a) Selection and preparation of the equipment and materials. (b) Preparation of the immediate surroundings of the patient. (c) Giving the treatment. (d) Making the patient comfortable and clearing away utensils, etc., and (e) Observing and recording results. As previously stated, in order to get certain desired results and to avoid other undesirable results, each article or material will have to be carefully

selected and handled and each step in the above phases of the procedure carefully carried out.

When a procedure is complex, with many factors and types of skill involved, the demonstration may be given in parts. For instance, a complete morning toilet includes the care of the mouth, hair, nails, and body and, in addition, making a bed with a patient in it—the latter, in itself, being usually found difficult and requiring much practice. Each division, also, has its own body of theory and special technique. The whole, however, should finally be assembled as a complete demonstration in the way in which students are expected to give it.

Again, the preparation for the treatment, or the treatment itself, may involve so many factors that it may be desirable to teach them in parts, finally assembling as a whole. For instance, it often arouses interest and gives a clearer picture of the whole, in such treatments as catheterization, if the instructor previously prepares for the treatment (sets the stage, as it were) and begins her demonstration with the treatment itself, then later showing how to prepare for it.

Sometimes the preparation of the treatment and of the patient may proceed together; for instance, while water is heating or articles are boiling, the patient may be partly or wholly prepared. Again, the treatment and the clearing away may be done, in part, together; for instance, while a patient is using the bedpan following an enema, it is often permissible to leave and clear away the utensils.

The demonstration given in the classroom, by relating each step to the condition, to the underlying principle, to the results desired and, also, to the standards of work given, should make all such adjustments or adaptations clear.

Recording a treatment and its results should also be included in a demonstration, not only to emphasize the importance of recording necessary information neatly, concisely, accurately, and promptly, but to establish a habit of keen observation, of associating cause with effect (and *vice versa*) and a feeling of concern and responsibility for getting results.

THE MORING TOILET—CLEANSING SPONGE BATH

CONDITIONS	OUTLINE OF PROCEDURE	SPECIFIC PURPOSES AND RESULTS DESIRED							UNDERLYING PRINCIPLES					STANDARDS OF WORK							
		Cleanliness	Stimulate Circulation	Stimulate Skin Function	Stimulate Sweat Glands	Refresh & Soothe Nervous System	Prevent Bedsores	Establish Hygienic Habits	Science Biological & Physical	Hygiene and Prevention	Psychological and Teaching	Social and Ethical		Safety of Patient & Others	Therapeutic Effect	Comfort & Happiness	Economy Energy	Economy Time	Economy Materials	Finished Work	Simplicity & Adaptability
	Preparation of Immediate Surroundings:																				
	Close windows if causing cold or draught																				
	Place screen around bed																				
	Clear table and place in position																				
	Place chairs in position for airing clothes																				
	Place bedpan and encourage patient to use it																				
	Assembling and Placing Equipment—Articles Necessary:																				
	A tray containing: Face basin with warm or cold																				
	water as patient desires to wash face.																				
	Foot tub with water 105° - 110° F.																				
	Bottle of mouth wash and swabs																				
	Hand brush and orangewood stick																				
	Bottle of "bathing solution" (alcohol 50%)																				
	Container of talcum powder																				
	Wash gauge for pubic region																				
	Paper bag																				
	Clean gown and bedlinen, as indicated																				
	Place tray on bedside table																				
	Place linen convenient for use, away from soiled linen																				
	Individual Articles on bedside table;																				
	Bath blanket																				
	Soap dish and soap																				
	Tooth brush, paste, cup and basin																				
	Comb																				
	Bath towel, face towel, and wash cloth																				

CONDITIONS	OUTLINE OF PROCEDURE	SPECIFIC PURPOSES AND RESULTS DESIRED							UNDERLYING PRINCIPLES					STANDARDS OF WORK							
		Cleanliness	Stimulate Circulation	Stimulate Skin Function	Stimulate Sweat Glands	Refresh & Soothe Nervous System	Prevent Bedsores	Establish Hygienic Habits	Science Biological & Physical	Hygiene and Prevention	Psychological and Teaching	Social and Ethical			Safety of Patient & Others	Therapeutic Effect	Comfort & Happiness	Economy Energy	Economy Time	Economy Materials	Finished Work	Simplicity & Adaptability
	Method: Preparation of the Patient:																				
	Establish pleasant and confident relationship; Loosen the upper bed clothes all around; Remove one or all pillows; Change case using soiled case for soiled linen (Pillows may be removed after cleansing teeth) Place pillows flat on chair, closed end toward door; Remove spread, fold, place neatly on chair; Place folded bath blanket, draw down over patient, fanning bed blanket and upper sheet to foot of bed; Place separately bed blanket and sheet neatly across chair to air, fold excess blanket up over feet and sides up toward center.																				
	Care of the Mouth: Place towel across chest and care for mouth as demonstrated.																				
	The Bath: Remove gown and wash in sequence. Handle wash cloth carefully, use firm gentle touch, dry each part separately and thoroughly, avoid unnecessary exposure.																				
	1. Face: Use no soap unless desired																				
	2. Front of neck and ears.																				
	3. Upper Extremities: Expose arm farthest away, protect bed with rubber and towel under arm, bathe hand and arm, give special care to axilla; dry thoroughly, cover warmly; repeat on other hand and arm.																				

THE MORNING TOILET—CLEANSING SPONGE BATH—(Continued)

CONDITIONS	OUTLINE OF PROCEDURE	SPECIFIC PURPOSES AND RESULTS DESIRED							UNDERLYING PRINCIPLES					STANDARDS OF WORK								
		Cleanliness	Stimulate Circulation	Stimulate Skin Function	Stimulate Sweat Glands	Refresh & Soothe Nervous System	Prevent Bedsores	Establish Hygienic Habits	Science Biological & Physical	Hygiene and Prevention	Psychological and Teaching	Social and Ethical			Safety of Patient & Others	Therapeutic Effect	Comfort & Happiness	Economy Energy	Economy Time	Economy Materials	Finished Work	Simplicity & Adaptability
	4. Chest — Loosen binder if present and permissable, bathe avoiding unnecessary exposure of breasts, give special care to area under breasts.																					
	5. Abdomen—Cover chest with towel, turn down blanket; be careful of dressings, if any, loosen and remove binder, if present, and if permissable; remove adhesive marks with benzine; bathe thoroughly with special care to umbilicus.																					
	6. Back—Turn patient with face toward nurse; Protect bed; examine parts especially in danger of bedsores; expose and bathe in parts and dry thoroughly; Rub back with bathing solution (as demonstrated) paying particular attention to bony prominences and reddened areas; rub until reddened areas disappear; Rub with small amount of powder; Place binder in position, turn patient on back, put on gown and fasten binder.																					
	7. Lower Extremities —Protect bed; expose and wash thigh farthest away, including knee; dry thoroughly; wash and dry other thigh. Place rubber and towel near foot of bed; Place tub in center of bed lengthwise;																					

CONDITIONS	OUTLINE OF PROCEDURE	SPECIFIC PURPOSES AND RESULTS DESIRED							UNDERLYING PRINCIPLES					STANDARDS OF WORK							
		Cleanliness	Stimulate Circulation	Stimulate Skin Function	Stimulate Sweat Glands	Refresh & Soothe Nervous System	Prevent Bedsores	Establish Hygienic Habits	Science Biological & Physical	Hygiene and Prevention	Psychological and Teaching	Social and Ethical		Safety of Patient & Others	Therapeutic Effect	Comfort & Happiness	Economy Energy	Economy Time	Economy Materials	Finished Work	Simplicity & Adaptability
	Tuck blanket between and around thighs;																				
	Soak feet in tub and wash from knees down;																				
	Support and remove feet from tub and place on bath																				
	towel; dry, paying special attention to heels and																				
	ankles; cover, then care for nails.																				
	8. Pubic Area — Protect bed; Patient to wash parts,																				
	if able; nurse to wash if unable or stitches or																				
	drainage present; orderly for male patients.																				
	Making bed and Making Patient Comfortable																				
	Pull down and arrange gown; make bed as shown in																				
	previous demonstration.																				
	Care of the Hair — Protect pillow and spread and care																				
	for hair as shown in previous demonstration.																				
	Care of Finger Nails — Nails may be attended to when																				
	the feet are soaking or at the close of the bath.																				
	Remove articles, cleanse and put in proper places.																				
	Precautions: Avoid any unnecessary exposure; dry all parts																				
	thoroughly; handle patient gently and carefully;																				
	use judgment in amount of linen used; leave patient																				
	warm and comfortable. Leave unit in perfect order;																				
	remove screen last.																				

THE MORNING TOILET—CLEANSING SPONGE BATH—(Continued)

CONDITIONS	OUTLINE OF PROCEDURE	SPECIFIC PURPOSES AND RESULTS DESIRED							UNDERLYING PRINCIPLES						STANDARDS OF WORK							
		Cleanliness	Stimulate Circulation	Stimulate Skin Function	Stimulate Sweat Glands	Refresh & Soothe Nervous System	Prevent Bedsores	Establish Hygienic Habits	Science Biological & Physical	Hygiene and Prevention	Psychological and Teaching	Social and Ethical			Safety of Patient & Others	Therapeutic Effect	Comfort & Happiness	Economy Energy	Economy Time	Economy Materials	Finished Work	Simplicity & Adaptability
	Attention to Personal Wants																					
	Provide for mental therapy according to special needs and interest; give pitcher of fresh water or hot drink if indicated; Leave bell within reach																					
	Text Book and References:																					
	Harmer, Wheeler, Sanders, Maxwell and Pope, Jammé, Reid, Hoffman, Jennings and Reid																					

Following each demonstration, a typewritten or mimeographed copy of an outline of the procedure (such as the following) may be given to each student. It is suggested that with each outline, space be left for notes or additions or alterations, made by the students, or instructor, and that the outlines be kept in the elastic form of a loose-leaf book thus making provision for future alterations and additions. A second convenient and admirable method is to have the outlines printed and bound in an inexpensive book form, such as the excellent and attractive manual of the Philadelphia General Hospital.

The following outline represents an effort to place the procedure in its proper setting in relation to other controlling factors. The purpose is to show that the procedure is merely a *means to an end* and not the end itself, as its undue emphasis in the past (or rather the lack of emphasis on results, on principles, and standards) has tended to make it.

Method of Use: It is suggested that, at least, the procedures taught in the pre-clinical period might be printed or mimeographed on such a form and using such headings. The teacher, having taught a lesson and demonstrated the procedure, would, in the usual way, give each student a copy. The lesson could then be *summarized* (always an excellent custom) by having teacher and students together, through class discussions, check in the proper column the desired results, principles, and standards which controlled or explained the reason for each step. For instance, the step "close windows to avoid draughts" would be checked under "to stimulate circulation," "to stimulate skin function," and "to stimulate sweat glands" because these desired results would probably be prevented by cold draughts. "Safety of the patient" and "comfort of the patient" would also be checked because both would be endangered by cold draughts.

Each step could be checked in a similar way. Such a practice carried on daily over a period of months would undoubtedly stimulate discussion and develop habits of thinking, of analyzing, of purposing and feeling concern for results and of knowing just why each step was taken and which step brought about

the desired results. A student's reason for doing things would not then be "because we have always done it that way." It would also give a student a better understanding and a sounder basis for evaluating different methods of procedures taught in different schools. Nursing would not then be mechanical and empirical but rational and scientific.

The constant practice in checking each step with proper standards would also establish high standards and the constructively critical attitude necessary if students are to have any direction and control of their own progress. The whole practice is in accord with the teacher's aim *to help students to help themselves.*

After several lessons in which teacher and students work together, a *second use* might be to have the students take the outline home as an assignment and independently, or in small groups, think through the process and check under the proper headings. The results could then be discussed, verified, or corrected in the following lesson. A *third use* might be a similar one, but given as part of a test or reviewed lesson. Other uses will suggest themselves to teacher and students.

By the end of the pre-clinical period proper habits of thinking, in relation to procedures, should be established. Whether or not the advanced procedures should be presented and taught in the same form might depend upon results obtained and left to the discretion of the various instructors.

4. *Student's Practice in the Classroom.*—In a previous discussion it was stated that practice should, if possible, follow the demonstration immediately, provision being made for each student to practice under supervision. In planning her lesson a teacher should see that sufficient equipment is provided and that it is easily accessible to all. If the amount of equipment or the number in the group makes practice under adequate supervision difficult or impossible, the group should be divided into sections.

Students may practice or work singly or in groups of two or more, depending upon the treatment. In many cases, a student

may act as a patient. If there is marked difference in the ability of the members of the class, it is suggested that the group be divided into sections based upon their ability. Additional practice with additional help and supervision may then be provided for the less skilful until they measure up to the standards of the group. Throughout the practice, emphasis should be placed on principles, on standards, on skill, on results, on progress and achievements for the individual and group.

It is suggested that a procedure card such as Table I and II be given each student on which she may check off procedures as taught, and again after she has demonstrated her ability to do it satisfactorily. This card should follow the student from ward to ward so that each head nurse may be guided in her plan of teaching for each student.

As has been suggested, the instructor should keep a record showing a group picture of all the procedures taught, and practised by the students under her instruction and supervision. As already suggested this group record may be posted on a bulletin board and the students, themselves, may check off the procedures they have satisfactorily accomplished. This record is analogous to the outline an instructor in a classroom or science laboratory would keep indicating the demonstrations she plans to give in her course and the experiments to be carried out by the students.

5. *The Assignment.*—For facts and underlying principles, students may be referred to the patients' charts and other records, and to text and reference books in nursing, medicine, and the basic sciences, etc.

Practice may be assigned to individuals as their needs indicate. Practice for the group may be assigned in the wards. This may be planned in the form of a project. For instance, if the object is to practice bed-making, a committee appointed by the class may interview the headnurses on certain wards and make an inventory of the probable number of empty beds to be made. They will then make a contract with the headnurses to make a certain number of beds each day at a convenient hour and covering a definite period of time. The beds then would be as-

signed to the members of the class in proper proportion. A schedule of the contract should be prepared by the group and a copy given to their teacher and to each headnurse. Such practice would be checked on the individual and group procedure records indicating the amount accomplished. All such practice should, of course, be carefully supervised and measured by the accepted standards.

Before the students are permitted to go to the wards to carry out such a project they should understand that such practice should not only contribute to their own needs, but to the comfort and happiness of the patients and the general efficient conduct and management of the ward—for instance, that their service should be regular from day to day in time, in number of workers, in amount contracted for, and that their work should be finished and should measure up to acceptable standards.

To train the students in observation, to focus thought on the patient and his condition, rather than on the procedure, the student should begin to keep an experience record even though the practice relates only to making empty beds—the bed belongs to a patient who is suffering from some disorder and the bed is empty because his condition or progress in recovery permits him to be up, all of which tells a significant story.

Review Demonstrations.—Such reviews are very desirable and with proper stimulus, encouragement, and guidance may safely be placed in the hands of the students as indicated in the project described on page 50.

The reviews may include both theory and practice and may be arranged weekly, monthly, at the end of a term, or whenever a summary or review is indicated. Sufficient notice should be given the group to allow for planning, for reading, for group discussion, and the necessary practice.

Use of Examinations. — Some form of examination is usually felt to be necessary both for the students and teachers. But, as previously indicated, such tests should be in the form of self-testing measurements. Such self-testing should not be left solely to the end of any particular period, but should be a *constant*

attitude of mind influencing and controlling conduct with a view to improvement, success, and the satisfaction which leads to further effort. The students themselves must see when their work is below standard, must be dissatisfied with it and desire something better before they will change, and conscious satisfaction must follow. This desire for improvement should be just as much a part of our mental and physical make-up as our appetite which normally tells us when we need food, how much we need, stimulates effort to get it, tells us when we have had enough and when we are satisfied.

The examinations set at the end of any period (short or long) will be helpful if in the form of questions or a piece of work (such as a written or oral report, or paper, or demonstration) which indicates to the students what they should have covered, whether or not what they have learned is scattered, or organized and systematized, and which tests their ability to apply and use their knowledge as independent workers in their practical experience. The real test of knowledge, skills, attitudes, and appreciations is in the actual care of patients both in the hospital and in the community.

Questions given should not only test present ability, but should stimulate interest in further projects and study.

As previously stated sufficient time should be given for thought, reading, discussion, planning, or practice. The completed work should include a bibliography of the sources of information used.

Use of Text and Reference Books, Etc. — It is said that "Books are, or at least ought to be, our servants, not our masters," and that the ability to use a book to the best advantage is a very valuable accomplishment.

The word "servant" suggests something personal, something which *belongs* to us, a book which serves as a ready, convenient, and faithful guide. To use as a servant and not as a master means to go to it not as to something which, in itself, must be learned or to something which determines what we shall learn—what our lessons shall be—but to something which will provide

us with accurate facts, principles, methods and standards, etc., which we need in overcoming difficulties, solving problems, and developing projects in our practical experience. The book then becomes a useful tool which, like all tools, requires knowledge and practice in using if it is to serve to the best advantage.

This mind-set or purpose in approaching any book—the feeling that we are going to get help in doing something in which we are interested; the degree of feeling of success and satisfaction in receiving this help which makes its use seem worthwhile; the exercise or frequent use, through ownership, which makes a book seem a familiar, well-worn, and reliable friend or companion, all determine how much students will learn from using a book just as these laws of learning determine how much we shall learn from any activity or experience.

The way to arouse this necessary mind-set is *not* by telling students what they can read and understand for themselves or by asking simply fact or memory questions from the book, or by simply following the outline, headings and paragraphs of the book; it is aroused by worthwhile projects, problems and thought questions which call for the assembling of facts (from, perhaps, different parts of the text book as well as from other books, etc.), the thoughtful analysis and organization of facts or principles, and their application in solving the particular problem at hand. We are all bored by hearing facts which we already know repeated and it is also a well-known fact that most people learn better by seeing or reading than by hearing. Students are never stimulated, their imagination and desire to learn are never aroused by hearing either teacher or students repeat something which they have read or can read for themselves. And it is well recognized that "the facts which have had some place in our thinking are the ones which we retain for future use."

Students vary greatly in their ability to use not only a text or reference book, but in their ability to recognize and use other sources of help available, such as their own experience, facts which are all about them in the open book of the wards, the experience and example of teacher or fellow-students, charts, mag-

azines, state or municipal bulletins, libraries and museums, etc. Students should be taught both how to use their text book—the use of index, table of contents, general plan of arrangement into large topics, sub-topics, principles and methods, with their uses and applications—and, at the same time, not to rely solely upon it. They should learn to recognize and follow cues and references in the text, or in their projects, or other sources of information such as mentioned above.

It is important to remember here that if, in our enthusiastic desire to broaden the student's viewpoint and knowledge, and to put them in touch with a wide range of resources, we make our assignments too long or too difficult for the time available, and for the ability of the students to accomplish with satisfaction, we will defeat our own purpose.

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SECTION IV

TEACHING AND LEARNING BY PERSONAL EXPERIENCE IN THE WARDS, OUT-PATIENT DEPARTMENT AND THE COMMUNITY.

CONTENT OF THE COURSE OF STUDY

We have previously stated that "the content of a course in the Principles and Practice of Nursing will necessarily include those ideals, attitudes, appreciations, knowledge, skills, and methods to be taught in the classroom; and that same content, made more rich, broader, more vital and lasting by its natural setting, which can be learned only by personal experience in the wards, out-patient department, and the community"; and that "the course to be given in the classroom and wards should be considered, not as separate subjects, but as one organic, interrelated whole, each supplementing and incomplete without the other." Emphasis has been laid upon the fact that we have, in the situations presented in our wards, those factors in education most truly vital; that is, the opportunity for teaching and learning by doing—the intelligent carrying forward of purposeful activities in the natural setting of the wards.

Subject Matter Organized Under Topics. — The content of the course, as presented in the field of experience in the wards and clinics, naturally groups itself, as indicated in the outline on page 24, into large or major topics each with its own, more or less, special content and contribution in terms of ideals, attitudes, appreciations, standards, knowledge, and skills.

These major topics arise from the customary division of services into medicine, surgery, pediatrics, obstetrics, communicable diseases, psychiatry, and (in nursing) community nursing outside the hospital with a visiting nurse or public health

organization. In nursing, also, the preliminary course, or that portion of the course which precedes clinical experience in the above majors (and is, therefore, a foundation for all), is, itself, a major topic.

The **special content** in each of these majors may, like the course as a whole, be determined by a **job analysis** of: 1. The **insight, knowledge, and understanding of** (a) the patients in a ward or clinic and the conditions from which they are suffering. Such knowledge, which depends upon the clinical material available, while the most rich, fruitful, and lasting is apt to be quite variable, not within our control, and to that extent incomplete, so must be supplemented by (b) the organized, systematized course which is given in the classroom.

The content or subject matter related to the patients in the wards or clinics might be arranged in lessons, the number depending upon the number of patients; or the patients might fall into groups according to the diagnosis, or the social aspects to be studied, or the various medical or nursing treatments prescribed. For instance, there might be several patients with some form of circulatory disturbance and the lesson might deal with a comparison of pathological conditions present, the causes, symptoms and signs, the mental, social, and economic aspects, the various treatments, their results, the prognoses, future prospects and plans for future welfare. Or, again, the lesson might be on a treatment such as a simple hypodermic injection or a hypodermoclysis, or a certain diet or drug given to different patients with the same or different diseases, for the same or for different purposes and with varying results. In all such lessons or discussions emphasis should be placed on the relation of the facts and underlying principles revealed and their use and application in the *program of nursing care for the patient.*

Again, the lesson planned might be to bring out the different ways in which patients sleep or do not sleep; such as, slept four hours but restless, crying out in sleep; did not sleep but quiet; slept only after a narcotic; awake and restless due to pain; slept well from ? to ? (early evening), awake from ? to ? but slept

toward morning; other illustrations might be discussed, using the night reports as reference, and taking up in each case the conditions, possible causes, preventive measures and treatments with the purpose of formulating principles of nursing care relating to the important factor of rest and sleep.

Many similar problems relating to the care of patients might form topics for discussion.

2. A job analysis of the **special skills** in terms of (a) the duties, procedures, and nursing measures included in the medical and nursing treatment of the above patients and conditions; and (b) the facts and underlying principles of such treatments which make nursing intelligent—give it meaning and content which lift it above the mechanical into the realm of science and art.

The outlines given below illustrate an analysis of such duties, which a headnurse instructor in a pediatric service and a communicable disease service would hope to teach all the students assigned to her course, that is, to her ward. Similar outlines would be kept in medical, surgical, and obstetrical services, etc., and, also, for the pre-clinical period. The spaces across the upper portion of the form are for the names of the students.

Likewise it is recommended that on this form, or on a separate form, should be indicated and checked the teaching and experience of the students in the care of those diseases which, it is felt, should be included in that particular service.

An instructor in a classroom keeps a careful record of what she has taught each student. This similar record, kept on the bulletin board outlining the content of the course in each ward, shows clearly to both teacher and students not only what has been taught in the classroom, but what has been taught and practised (learned by doing) by each student in the natural setting of the wards. It also defines the course and enables the student to grasp the content in terms of skills to be learned and to measure their progress in learning. Each procedure and experience in nursing may be checked by the teacher or, better still, by the student giving her that added satisfaction in achieve-

SPECIAL PROCEDURES IN COMMUNICABLE DISEASES

Date_____

Students																																			
Procedures	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice
Admission of Patient																																			
Two Admitting Rooms																																			
Care of Clothing																																			
Admission Slip																																			
Instruments																																			
Calling Doctors																																			
Care of Valuables																																			
Care of Money																																			
Patient as a Unit																																			
Gown Technique																																			
Hand "																																			
Notation of significant symptomsor signs, mental and physical (abrasions, eruptions, swellings, scars, deformities, body discharges, pediculosis).																																			
Temp. Pulse and Resp.																																			
Admin. of Medicines																																			
Adaptation of Treatments																																			
Collection and Care of Specimens																																			
Feeding Patient																																			
Housekeeping																																			
Dropped Articles																																			
Utility Room																																			
Sterilization																																			
Wash Basins																																			
Bedpans																																			
Urinals																																			
Instruments																																			
Rectal Tubes																																			
Glass																																			
Dishes																																			
Trays																																			
Water Pitchers																																			
Disposal of Waste																																			
Feces and Urine																																			
Food Waste																																			
Care of Trays and Dishes																																			
Drug Shelf																																			
Hoppers																																			
Racks																																			

SPECIAL PROCEDURES IN COMMUNICABLE DISEASES—(Continued)

- Floor
- Kitchen
  - Incinerator
  - Stove
    - Oven
    - Sterilizer
  - Ice Box
  - Housekeeping
    - Towels
    - Exterminator
    - Sink
    - Utensils
- Terminal Care
  - Patient
  - Unit
  - Mattress and Pillows
  - Linen
  - Blankets
  - Bed Rubbers
  - Books and Toys
  - Chart
- Special Treatments
  - Diphtheria Antitoxin
  - Scarlet Fever Antitoxin
  - Antipneumococcus Serum
  - Antimeningococcus Serum
  - Throat Irrigations
  - Application of Ice Cap
  - Nose and Throat Cultures
- Discharge of Patient to Morgue
  - Care of Body
  - Care of Clothing
  - Escorting Body to Morgue
  - Slips
- General Rules
  - Visiting

SPECIAL PROCEDURES IN PEDIATRICS

Date_____

Students																															
Procedures	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice	Dem.	Practice
Admission of Patient (See Routine Posted)																															
Isolation Precautions																															
Daily Care of Patient																															
Bathing																															
Care of Skin																															
Preparation for Porch																															
Preparation for Night																															
Premature Care																															
Infant Feeding																															
Breast Feeding																															
Bottle Feeding																															
Breck Feeder																															
Medicine Dropper																															
Nasal Feeding																															
Gavage																															
Lavage																															
Conduct of Feedings																															
Formula Room																															
Feeding Older Children																															
Preparation of Trays																															
Preparation of Meals																															
Feeding Child																															
Teaching Child to Eat																															
Medications																															
Dosage Computation																															
Administration																															
Treatments																															
Restraint																															
Wrapping for Treatment																															
Vena Puncture																															
Collection of Specimens																															
Metab_lism Bed																															
Violet Ray																															
Pediculosis Treatment																															
Rectal Tube																															

SPECIAL PROCEDURES IN PEDRIATICS—(Continued)

Suppository
Enema
Rectal Irrigation
Proctoclysis
Intraperitoneal Saline
Transfusion
Intravenous Glucose
Lumbar Puncture
Serum Injection
Catheterization
Vaginal Smear
Ear Irrigation
Ear Drops
Eye Irrigation
Eye Drops
Nose Irrigation
Nose Drops
Throat Irrigation
Mouth Irrigation
Opening Retropharyngeal Abscess
Inhalation
Sponge
Pack, Cold
" Hot
" Mustard
Tubbing
Administration of Oxygen
Artificial Respirations

Skin Conditions and Medications
Application of Ointment
Treatment of Seborrhoea
" " Eczema
" " Furunculosis
" " Intertrigo
Blue Ointment to Binder

Post-operative Care
Hare Lip
Pyloric Stenosis
Intussusception
Adenoids and Tonsils

Post-mortem Care

Discharge of Patient
Miscellaneous
Care of Treatment Equipment
" " Syringes
" " Needles

Charting
Daily Record
Permanent Record

ment and the opportunity, at the same time, to measure the amount still to be accomplished.

3. A job analysis of the **standards of work, attitudes, tastes and appreciations, and the qualities** which make students prefer one service or one kind of work to another and which, in turn, are accentuated and developed, that is, *learned by practice* in that particular service or kind of work. For instance, there is a difference, more clearly felt than defined, in these various services, which makes some doctors specialize in one or the other; and, too, it is often possible to distinguish a medical doctor or physician from a surgeon, just as it is often thought possible to differentiate people in other callings. There is a difference in both the services and in the qualities of the people making the choice, and, in turn, each reacts upon the other, as cause upon effect, and *vice versa.*

There is a difference in the very atmosphere of our medical and surgical wards, between these and an obstetrical ward, and between each of these and a children's ward. This atmosphere is created, in each case, by the different situations, conditions, treatments and activities, and by those who conduct these activities.

All such differences are seen to have great potential significance in teaching and learning when we remember that all education is a process of growth and development (not only in knowledge and skills but in qualities of heart and mind) brought about by the constant adjustments we are obliged to make. Different conditions and situations require, and therefore demand and give practice in using, different qualities or rather possibly the same qualities, but in different degrees. These different demands, therefore, bring opportunities to teach and learn certain qualities and abilities as well as special knowledge and skills. For instance, in surgery we expect to teach, and the students to learn, about various operations and their treatment and to acquire skill in aseptic technique in assisting with dressings. In the same way, at the same time, and by the same method they should also learn especially such qualities as alertness, both mental and

physical, presence of mind, ability to make quick decisions, a general preparedness for the unexpected, good judgment, and a high degree of technical skill. In medicine, on the other hand, because of the often prolonged duration of the disease, the frequent obscurity or un-get-atableness of the cause, the small, slow returns from treatments, the scene moves more slowly, the tone is lower, often more sombre, and changes are not so rapid; here, therefore, one has to have infinite patience, to be thoughtful and reflective, to be very observant and sensitive to very slight changes or symptoms and signs; one has to be satisfied with slow, small returns, with success and hope deferred, to cope with difficulties, often over a long period with seemingly little results; and one must have imagination, sympathy, knowledge, and skill in dealing with people and in making them happy and comfortable, mentally and physically, in spite of the uncertainty and the frequently prolonged illness.

Content of the Course Indicated as Inside the Ward

Someone once suggested as an inscription to be placed over the door of a new library: "This is not the library; the library is inside." So, too, is the basic course in nursing given *inside* the wards and clinics.

It would be extremely helpful if this truth, which we all feel, were clearly indicated to all—teachers, students, and doctors, —by posting in each ward and clinic, on a bulletin board kept for educational purposes, the heading **Content of the Course in Surgery or Medicine, Etc.,** with the **job analysis** under the three major sub-headings mentioned. Students would then know why they were assigned to such a ward or clinic, what it is they have an opportunity and are expected to learn, how to plan and map out their work and study, and could themselves measure their ability, and the rate and amount of their achievement and progress, in relation to their own ability and to the standard set by the group.

Such an outline would indicate the headnurse and teaching

supervisor's course or teaching program. With it she would have her list of students assigned to the course just as would any teacher in a classroom.

In addition to a job analysis of the content of each course, the **methods of teaching and learning** (such as the assignment of patients, the use of case studies, experience records and conferences, etc.) should also be posted on the bulletin board so that the students might differentiate between content and method and see the relationships between them.

Simple Job Analysis of Procedures. — This has previously been discussed in relation to classroom teaching. A complete record of the technique of all the procedures should be kept in each ward as part of the content of the course. Reference and text books related to the subject or service should also be available in the ward classroom.

Content Based on a Job Analysis of the Needs of the Individual Patient; or *A Scientific Case Study as a Basis for Treatment and Nursing Care.* Emphasis has already been made to the need for such studies and an illustration has been given. Mention was also made under the Producer's Projects which will be further discussed under Methods of Teaching. Mention is made here because the facts and principles revealed and the resulting program form a definite part and contribution to the **content** of nursing.

Sequence of the Topics or Services and Time Required in Each. The sequence of experience in the various services and the time to be spent by each student would, necessarily, like any other subject to be taught, depend upon the content of each course, the relative value of each, the ease or difficulty with which it is learned, and the capacity of the individual student.

As the length of the whole basic professional course in nursing is limited to a definite period of from two to three years, our plan should also provide for a definite period to be spent by each student in the various services, the time spent in each, and the sequence of rotation from service to service to depend, not upon hasty planning or no planning, or upon chance or the force of

circumstances (barring illness, etc.), but upon the educational value of each and upon the relation one service bears to the other; that is, it is well to have the *elemental* (not elementary because it is fundamental and forms the *foundation* of nursing principles) or basic experiences precede an experience in which the knowledge or skill gained in the first can be transferred or used, adapted, or applied to advantage in the second. For instance, experience in a surgical ward usually precedes the operating room, and it is also better and safer for both patient and nurse if the operating room (where attention can be concentrated on one patient in one room so the student can be closely supervised) precedes the obstetrical and communicable disease experience, in both of which a thorough knowledge of aseptic technique, surgical or medical, is so necessary. Again, as previously stated, it is desirable that students learn to observe, to understand, and to care for infants and young children in a general pediatric ward before being thrust into the responsibilities and the danger to herself and others in caring for children in a communicable disease ward.

This same principle of planning a cycle or sequence of experience and of assigning patients and duties based on the needs of the patients and the experience and ability of the students should be observed in each service.

To plan implies an assurance of a certain degree of control over the future; otherwise—if we know or believe we have no such control and that the future is entirely controlled and arranged for us by someone else—it is useless to attempt to shape the future for ourselves or others; therefore we have no responsibility for what may or may not happen. Herein, it would seem, lies one of the greatest drawbacks in our school system, in that the headnurse instructors in the wards, where the opportunities for teaching and learning are so great, frequently know little of what is being planned; that is, they seldom know much in advance which students are coming to them, when they are coming, what their background of education and experience has been, their weaknesses and strengths, in what they need most help

and guidance, or *how long they will remain with them to be taught.*

Such uncertainty as to the past, present, and future, will usually dampen any interest or enthusiasm on the part of a headnurse for planning the experience or teaching of students. This uncertainty does not develop in either teacher or students a sense of responsibility, initiative, foresight, executive ability, or any of those factors in self-direction which enable people to help themselves. Why should she be interested in teaching and planning? Why should she take thought for the morrow of a student who may not be with her on the morrow? Sufficient unto the day is her only security and will probably be her thought (conscious or sub-conscious) in planning.

The headnurse, because of her position, her close contact with the students, and her control of their experience, occupies a strategic position which, it would seem, should be recognized and utilized in the whole teaching program.

Time Spent in Each Service. — It has been indicated that our plan should provide that each student spend a definite period in each service, the time spent to depend upon the educational value of each. The question immediately arises—what is the educational value of each?

It is fairly safe to say that, at present, no one can answer this question satisfactorily because there has never been a scientific study made of the *content* which should be covered, or how long it would take to cover it. That is, we have no classified analysis of cases cared for by students in our medical or surgical wards, etc., or of the treatments given, by means of which any comparison might be made from month to month in any one hospital or between different hospitals. Two months at one season or in one hospital might be equivalent to three months at another season or in another hospital.

We cannot, therefore, accurately evaluate any two, three, or four months' experience so can only express an opinion (and opinions vary greatly) as to how long this experience should be. We approach a sound basis more closely in the obstetrical ex-

perience when the requirements state that a student should have assisted with or delivered a certain number of patients. The same is sometimes true of the operating room.

It seems quite clear, with even a superficial glance at the problem, that to give our students, even in the same hospital, equal opportunities, records should be kept whereby the students' experience in terms of patients (or cases) cared for might be evaluated and reshaped in so far as our control of conditions make possible.

This problem of planning the experience of the students in advance and sharing this plan with all those concerned, while a very difficult one to solve, is by no means an impossible one, and the results will well repay any amount of time, effort, and patience involved.

Services Included in Experience. — In addition to the usual services offered—medicine, surgery, obstetrics, and pediatrics—every effort should be made to provide experience in the care of mental disease, diseases of the eye, ear, nose, and throat (so serious in their complications and so commonly met with in home, school, and in all forms of public health nursing); and in some form of community health nursing. The out-patient department or dispensary offers a rich vein of experience which we have only begun to tap. We are missing a great opportunity for teaching the prevention of disease, the watchword of modern medicine and nursing, if our students do not have experience in the various clinics (supervised by workers who have a keen appreciation of the social and economic aspects of disease and methods of prevention) as part of their general nursing experience in medicine, surgery, pediatrics, obstetrics, and mental and nervous diseases.

SECTION V

METHODS OF TEACHING

The methods of teaching used in the ward, or any part of the field of experience, should, like those in the classroom, be based upon and governed by the **Laws of Learning**—*Readiness, Mind-set, or Purpose; Law of Effect—Satisfaction (success) or Annoyance (failure); Law of Exercise, Recency, Intensity, and the Law of Association.*

Mind-Set or Purpose—Service to Patients. — Our first thought is that there are patients to be cared for whom we desire to serve; the patient, and his needs as an individual, will be at all times the centre of our thought and study.

This service to a patient or patients will consist of purposeful activities carried to completion in their natural setting. As previously stated, bound up with this service, not apart but inseparable from it, there is a content in terms of ideals, attitudes, appreciations, standards, knowledge, and skills which our students should learn by doing and serving. We cannot emphasize too much the fact that there is no other way of becoming a good nurse except by doing intelligent, skilled nursing in the spirit of service. The more good nursing one does, the better nurse one becomes. It is like the parable of the ten talents in the Bible; the talents which were put out to good use were not only doubled, but the one who made good use of his talents was richly rewarded with wider and greater opportunities and responsibilities, and with capacity to enjoy them. To the one who failed to use his talent, the talent, itself, was taken away and the man was punished with failure and the loss of the opportunity to use even the talent he had.

An interesting aspect in relation to this parable is the basis of reward; in each case the reward is based upon achievement

in relation to individual capacity, in that the same reward is granted to the man who doubled his two talents as to the one who doubled his five talents.

Our standards and what we do, the student's standards and what she actually does, and the way in which she does it (the accompanying thought, feeling and appreciation) determines whether she is learning to be a good nurse or a poor nurse. Our problem is to keep these factors constantly before us; to think of and develop each ward or dispensary clinic, etc., as a special and essential aspect of a course in nursing—the headnurse and teaching supervisor the teachers who plan their course both in content and method guided by the same aims and principles as those laid down for her sister instructor in the classroom. It is desirable that the teachers in the wards share, to some extent at least, in the teaching in the classroom for many reasons—to break down the wall or barrier between the classroom and the wards, between theory and practice, and the attitude of mind toward the ward as a place to work in rather than to teach and learn in. This co-operation also insures uniformity of teaching and that the teachers will be available to help the students to recognize and solve difficulties and problems as they arise.

Mind-Set or Purpose—Spirit, Ideals, and Method of Science. — To develop this mind-set, which is stated as one of the aims of the course, perhaps it would be well to compare nursing with one of the recognized sciences.

Science, to quote from Havelock Ellis (who in turn quotes from Dr. Charles Singer, one of the most noted historians of science) on the "Art of Thinking," is defined, "no longer as a body of organized knowledge, but as 'the process which makes knowledge,' as 'knowledge in the making'; that is to say, the growing edge between the unknown and the known. As soon as we thus regard it, as a *making* process, it becomes one with art."

Nursing is accepted generally as an art but not so generally as a science. To discuss this distinction is not the purpose of the present pamphlet, but to urge that at least we profit by the

lessons which science, in its spirit, ideals, and methods has to teach. This is one of the great lessons of the age in which we live.

When we compare our course in nursing with a course in science, such as chemistry or anatomy, we find that, while they differ widely in many aspects, yet they are alike in that each consists of lectures, recitations, demonstrations, and of laboratory experience if we (with caution and reservations) for convenience and for what is revealed, speak of our wards and clinics, as laboratories.

An instructor in chemistry will plan the laboratory experience with the same care and detail as her classroom lectures and recitations. We should plan it with even greater care and detail both for the safety and comfort of our patients and because, as stated previously, the ward experience is the most vital, most rich in knowledge and opportunities for teaching and learning.

When we analyze our wards or dispensary clinics as fields for teaching and learning and compare them with a science laboratory, it is apparent that we have many advantages from an educational point of view, advantages much sought after in modern education, not only by teachers in science but by teachers in mathematics, geography, history, and literature.

This is because in the very nature of our work or experience are inherent those factors, summed up in the term projects, most conducive to learning, to the development of character and personality. To the would-be nurse, prompted by the desire to serve, not only is the whole course a project or series of projects but in this respect, there need be no break except in time and place, between her present experience as a student and her future experience as a graduate; the one is the natural outgrowth and development of the other, a continuation of learning and growth.

This fact has great potential value in teaching and learning; its significance should be fully appreciated and utilized by both teacher and pupils.

Further analysis and comparison of our laboratories and a science laboratory, reveal the following contrasts and similarities, all of which suggest opportunities for teaching and learning:

1. In both we have facilities for teaching—well-lighted, well-ventilated, attractive rooms with equipment and illustrative material for teaching. 2. In both we have students and a teacher or teachers. In the nursing laboratory the teacher is the head nurse with the collaboration of the teaching supervisor and specialists, such as, doctor, social service worker, metabolism and nutrition worker, mental hygienist, occupational therapist, dental hygienist, and physiotherapist. 3. In both, the students learn by doing, the amount learned depending upon the purposefulness of the activities, the continuity of experiences, and the amount of thought given to them. 4. In both, the teaching is less formal than in the classroom and there is the advantage of the direct contact of mind to mind, and of individual or small group teaching. There is also the great advantage in a nursing laboratory of being able to assign duties according to the needs, the individual capacities, and the degree of knowledge and skill of the learner. The students can also be measured in an all-round way and according to their achievements in relation to their individual abilities. They thus feel their mark to be fairer, more just, than in the classroom. 5. In both we have groups working together, but in the nursing laboratory we are apt to have a more highly socialized group, not only because we know the learning process and future needs make this desirable, but because, in addition, the present successful completion of the work in the wards demands it. In a science laboratory, as a rule, each student carries out his own experiment unrelated (while it may be the same) or uninfluenced by the success or failure of the others. He does not have that sense, at least in as natural or real a way, of sharing and co-operating in activities having a common purpose and each contributing to the success of the whole. Herein lies our opportunity to develop those social qualities of character and personality previously mentioned under aims and ideals. 6. In a nursing laboratory, the students are prompted by an altruistic spirit of service to the patient, the desire of learning knowledge and skill being secondary, often unconscious and requiring stimulation. 7. In a science labora-

tory the student's purpose, if he has one, is to use the knowledge or skill for his own ends. Frequently, however, he has no aim and no immediate use for the knowledge, and his idea of its future use is too vague and remote to supply incentive or motive in learning.

In nursing, every time a student nurse performs a service intelligently, successfully, she *is being* a good nurse, and to that extent is constantly achieving her goal, and should have all the satisfaction of doing so. The tremendous possibilities of this we realize when we recall the "Law of Effect" in learning.

8. In a science laboratory, experiments or procedures are not repeated until perfected, because skill, although necessary, is not a prime objective. In nursing it is essential, and provision in teaching must be made for acquiring it. This has been discussed under the Law of Exercise. 9. In both, there is a definite content to be learned for present and future use. The content in a ward, has already been outlined. 10. In both a nursing and science laboratory, the scientific method of work or study is equally applicable. In our ward, however, although our students, by their accurate observations, careful records, and nursing care, share daily in using this method, they, as a rule, are totally unconscious of the steps taken as being part of a method. All too frequently, neither in the wards nor when studying any of the sciences in the laboratories, where they either use or see demonstrated all the steps in the process, is this method explained as *method.* Its significance, the thrilling story of what its use has achieved in the progress of medicine, of science itself, and other fields of learning, and its application to our own field have, in a large measure, been ignored. We ourselves, quite naturally and in the midst of almost insurmountable difficulties, have, perhaps unavoidably, tended to completely ignore it; and yet, so universal is its use and application, so free does it make us as independent workers, capable of solving our own problems, that an instructor, doing a piece of research work in physiological chemistry covering a period of a year, when asked, "What do you consider has been of greatest and most lasting value to yourself

from this year's work in research?" unhesitatingly replied, "A method of work," adding that no matter what she might want to study in future she would know how to go about it so as to obtain results scientifically accurate and with the greatest economy of time, energy, and money. (An illustration of this method in a more closely related field is that of a doctor in making a diagnosis.)

We feel, therefore, that to have our students grasp the spirit of science, the significance of its achievements; to give them some freedom, through practice, in the use of scientific methods, with all that is implied in clearness and accuracy of thought and statement, will be one of the greatest, most lasting and far-reaching benefits to them. It must be understood that nothing which is said here or elsewhere is in the light of criticism or lack of appreciation. On the contrary, the writer, when discouraged, has only to reflect upon the present and past achievements of our splendid nurses to be stimulated and inspired by their example. We are now, however, entering upon a new era in nursing, and it is this sense and spirit of progress which gives us courage and hope for the future. 11. Between a nursing laboratory and a science laboratory, there is a striking difference in our observations or experiments, in that, in the first we are trying to save the lives of the human beings under treatment; whereas in the second, we deal mostly with inanimate things or with animals, not for the purpose of saving their lives (which, however, may be highly valued and protected) but for saving the lives of future human beings.

In a science laboratory each thing that is done is more or less, frankly, an experiment to find out or to prove something in which the result may or may not be of benefit to the animal. The product may be thrown away as of no value—what the student learns only is of prime value.

In nursing, on the other hand, we do nothing that we are not reasonably sure will be of benefit to the patient. Each feeling, thought, or act of the nurse is of more or less vital importance because it plays a *constructive* part in the curative or

preventive health program. The purpose is service—what the student learns has most value when it brings, at the same time, the satisfaction of contributing to the welfare of the patient.

Service to the Patient as an Individual, the Unit or Centre of Thought and Practice. — There are two methods, commonly used in our wards, of regulating the service rendered to patients and the experience of the students; one is rightly called the *Efficiency Method,* the emphasis usually being on *training,* and the economy of time and energy in accomplishing the work which has to be done. In this method the patient is not the unit or centre of thought. But the *work to be done* is classified into, beds to be made, baths to be given, temperatures to be taken, treatments to be given, diets to be prepared and served, medications to be given, charting to be done, dressings to be done, etc. *The thing to be done* is the unit and centre of thought and endeavour. This does not mean to suggest that, when this method is used, thought is not given the patient, but that the emphasis, in the minds of young, inexperienced students, tends to be largely on the thing to be done.

The second method is that of making the **patient the unit or centre of thought,** the student's whole endeavour being to render the best possible service based on his individual needs. It is sometimes called the **Case Study Method** but the term is used here rather reluctantly because of its possible misuse and misinterpretation, the emphasis being on the *case* and not the *patient,* and on the *study* and not the *service.*

In this method, two, three, or four patients are assigned to each student, the number depending upon their condition, and the student's experience, ability, and opportunity to give them adequate care. The student is made entirely responsible for these patients (as far as their safety and comfort will permit) during the hours assigned. During the hours when the student is not on duty, these patients are assigned to a second student, the first, however, following with interest and concern the patient's welfare throughout. Such treatments required by the patients, if not already learned, are taught *as the need arises* providing they

are not too difficult to be understood and carried out by the student in accord with given standards.

The following outline indicates a method of assigning patients: It represents the patients, etc., assigned to a group of students during a week of their experience on a male medical ward. The spaces crossed indicate that the students were off duty for the day.

It may be mentioned here that this method, as outlined, and the same form have also been used with marked success over a considerable period of time in wards staffed almost entirely by graduate nurses, where the emphasis is not on the education of students but only on the care of the patients and the *efficient management* of the ward. It is stated by headnurses and graduates on general duty, or group nursing, that the method insures a more interesting, a more varied, and a more even distribution or assignment of the patients so that all are cared for and all the nurses complete their work about the same time. The method is, therefore, found to be an *efficient* method. Other advantages are stated in the following paragraphs:

Length of Time Patients are Assigned. — The length of time a patient will be assigned to any one student demands very careful thought both from the standpoint of the patient and the educational needs of the student. No set time can be given as the needs of each patient and each student will vary more or less. To change too frequently is to ignore the needs and to destroy the benefits of this method to both patient and student. On the other hand, it is important that every effort be made to assign the patients and to regulate the student's hours of assignment to give her a rich and varied experience. This careful planning and teaching are only possible when the headnurse knows how long she may expect the students to remain with her.

Advantages and Disadvantages of Above Methods. — That both methods have advantages is true; that by both methods good nursing may be assured, and that both may develop good nurses, the excellent work done under both methods, and the many excellent nurses trained testify.

Nov. 16-22, 1925

CLINICAL EXPERIENCE—ASSIGNMENT OF PATIENTS

Name		Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Miss L	Time	7-1	7-9:30,1-7	7-9:30,1-7	7-1,4:30-7	7-9:30,1-7	Day off	1-7
	Group I	Mr. Formisano " Bierne " Smith " Brahney	Mr Formisano " Bierne " Sheedy " Brahney	Mr. Sheedy " Brahney " Delamater } Gr. III " Skariofsky }	Mr. Sheedy " Brahney " Bell " Curtis	Mr. Sheedy " Brahney " Bell " Curtis		Mr. Sheedy " Brahney " Bell " Curtis
	Relief	Group II	Group II	Group II " VI (4:30-5:30)	Group II			Group II
	Special Duty	Trays Utility room	Trays Utility room	Trays Utility room	Trays Utility room	Trays Utility room		Trays & Drugs Utility room
Miss B	Time	7-9:30,1-7	7-1	7-1,4:30-7	7-9:30,1-7	Day off	7-9:30,1-7	7-1
	Group II	Mr. Henderson " Wright " Shepherd " Gomez	Mr. Henderson " Wright " Shepherd " Gomez	Mr. Henderson " Wright " Shepherd " Gomez	Mr. Henderson " Wright " Shepherd " Gomez		Mr. Henderson " Wright " Shepherd " Gomez	Mr. Henderson " Wright " Shepherd " Gomez
	Relief	Group I	Group I	Group I " IV,VI (4:30-5:30)	Group I " III,V (4:30-5:30)		Group III	Group I
	Special Duty	Drugs Medicine cabinet Sterile supplies	Drugs Medicine cabinet Sterile supplies	Drugs Medicine cabinet Sterile supplies	Drugs Medicine cabinet Sterile supplies		Drugs Medicine cabinet Sterile supplies	Drugs Medicine cabinet Sterile supplies
Miss P Classes; Tues. Wed. Thur. } 4:30-5:30	Time	7-9:30,1-7	7-3:30	Day off	7-1,3:30-4:30,5:30-7	7-1,4:30-7	7-1	1-7
	Group III	Mr. Delamater " Skariofsky " Campbell " Distano } Gr. VI " Olechnowecz }	Mr. Delamater " Skariofsky " Campbell " Verillo } Gr. V " Robertson }		Mr. Delamater " Skariofsky " Campbell " Costello } Gr. II " Goffin }	Mr. Delamater " Skariofsky " Campbell " Henderson } Gr. II " Wright }	Mr. Delamater " Skariofsky " Campbell " Sheedy } Gr. I " Brahney }	Mr. Delamater " Skariofsky " Campbell " Distano Gr. VI
	Relief	Group IV,V (1-4:30)	Group IV (1-3:30)		Group V	Group I	Group II	Group IV " V (1-4:30)
	Special Duty	Diets - kitchen	Diets - kitchen		Diets - kitchen	Diets - kitchen	Diets - kitchen	Diets - kitchen

CLINICAL EXPERIENCE—ASSIGNMENT OF PATIENTS—(Continued)

Miss C Classes; Tues. Wed. Thur. 4:30-5:30	Time	7-1	7-1,3:30-4:30,5:30-7	7-1	Day off	7-3:30	7-1,4:30-7	7-1
	Group IV	Mr. Costello " Goffin " Fisher " Kupinsky Gr.VI " Sheedy	Mr. Costello " Goffin " Fisher " Tower Gr.V	Mr. Costello " Goffin " Fisher " Campbell Gr.III		Mr. Costello " Goffin " Fisher " Shepherd } Gr. " Gomez } II	Mr. Costello " Goffin " Fisher " Bell Gr.I	Mr. Costello " Goffin " Fisher " Olechnowecz Gr.VI
	Relief	Group III	Group III (3:30-7) " VI (8:30-1)	Group VI (8:30-1)		Group VI (8:30-3:30) " V (1-3:30)		Group III
	Special Duty	Diets Bath room	Diets Bath room	Diets Bath room		Diets Bath room	Diets Bath room	Diets Bath room
Miss S Classes; Tues. Wed. Thur. 4:30-5:30	Time	7-1,4:30-7	Day off	7-1,3:30-4:30,5:30-7	7-3:30	7-1	7-3:30	7-1
	Group V	Mr. Merkin " Verillo " Robertson " Towers		Mr. Merkin " Verillo " Robertson " Towers	Mr. Merkin " Verillo " Robertson " Towers " Fisher Gr.IV	Mr. Merkin " Verillo " Robertson " Towers " McDonald	Mr. Merkin " Verillo " Robertson " Curtis Gr.I	Mr. Merkin " Verillo " Robertson " Kupinsky Gr.VI
	Relief				Group III " VI (8:30-3:30)		Group VI (8:30-3:30) " IV (1-3:30)	
	Special Duty	Laundry Linen room Clothes "		Laundry Linen room Diets	Laundry Linen room Diets	Laundry Linen room	Laundry Linen room	Laundry Linen room
Miss D Medical Dispensary 8:30-1 every day	Time	7-11	7-8:30,4:30-7	7-8:30	7-8:30	7-8:30,4:30-7	7-8:30,4:30-7	Day off
	Group VI	All patients 7-11 P. M.	Mr. Distano " Olechnowecz " Kupinsky " Merkin Gr.V	Mr. Distano " Olechnowecz " Kupinsky	Mr. Distano " Olechnowecz " Kupinsky	Mr. Distano " Olechnowecz " Kupinsky	Mr. Distano " Olechnowecz " Kupinsky	
	Relief		Group III " IV (4:30-5:30)					
	Special Duty		Clothes room	Clothes room	Clothes room	Clothes room	Clothes room	
Miss G Classes; Tues. Wed. Thur. 4:30-5:30	Time	Day off	1:30-4:30,5:30-11	1:30-4:30,5:30-11	3:30-4:30,5:30-11	2:30-11	2:30-11	4:30-11
	Group		All patients 7-11 P. M.	All patients 7-11 P. M.	All patients 7-11 P. M.	All patients 7-11 P. M.	All patients 7-11 P. M.	All patients 7-11 P. M.
	Relief		Group VI (1-4:30)	Group VI (1-7) " IV (1-7)	Group VI (3:30-7)	Group IV,VI 3:30-4:30 " V (3:30-7)	Group V (3:30-7) " IV,IV (3:30-4:30)	Group V (4:30-7)
	Special Duty							

The question is, which tends to insure the highest quality of service, which insures a more thorough understanding of the patient's needs, which is more likely to meet the students' present and future needs, and which is more likely to develop the habits of thought, feeling, and conduct, as well as knowledge and skill, which we deem desirable and necessary?

The writer has had a fairly long and wide personal experience, as a student and as a graduate, and has talked with many students and graduates of the advantages and disadvantages of each method, so speaks from experience. However, the remarks which follow are admittedly too sweeping and are meant not to cast reflection upon the quality of work or the product, but to stimulate thought and discussion of the methods themselves.

The advantages of the Efficiency Method have been indicated. Probably a judicious use of this method is necessary in order to give sufficient practice in certain procedures to develop speed, precision, and skill based upon the Law of Exercise and Recency of use, etc. It is possible, too, by this method to develop a body of knowledge and principles about such subjects as the cardinal symptoms, temperature, pulse, and respiration, or the various types and stages of wounds and their treatments, because it means contacts and facts learned about a great number and a great variety of patients and diseased conditions, and also with many phases of disease. It gives an extensive rather than an intensive experience.

Perhaps more important still is the opportunity for making comparisons and noting contrasts which are often striking and which reveal facts which would otherwise be unobserved. For instance, when a student is taking and recording in a book the cardinal symptoms of *all* the patients in a ward, the impression of the pulse and temperature, etc., of the first patient is fresh in her mind when taking that of the second, and that of the first and second when taking that of the third, and so on, each throwing the other into relief as black against white, so that each is observed more clearly and distinctly because of the other. It is possible, too, to build up associations; for instance, to associate

a high tension pulse with nephritis, if there are several cases in the ward.

While all this is possible, it is not very probable if the emphasis is on taking the pulse, etc.,—the thing to be done and on getting it done. The facts learned will relate chiefly to the thing done and the mechanics of doing it. This method, therefore, in spite of its advantages, is apt to have all the faults of mass production —quantity at the expense of quality, skill at the expense of knowledge and understanding of the patient, and appreciation of his condition and his needs.

Advantages of Second Method—The Patient as a Unit the Centre of Thought. — This method, in the opinion of the writer, has many advantages for both patient and student; also for the headnurse who is responsible for the patients, and for the smooth running of the ward.

Effect on the Patient. — As regards the patient, we have only to imagine ourselves (and this imagination is something for students to cultivate) in his place, to appreciate the ease of mind, confidence, and relaxation of mind and body which comes from knowing that the person caring for you understands your needs, and is competent to do all that may be required. That feeling of uncertainty, anxiety, and even fear and shrinking which often comes to a sick person, already shaken and fearful, every time a strange or different nurse approaches him, may act as a slight shock and, when frequently repeated, may have a cumulative effect having, to some degree at least, the harmful effect of the anxiety and doubt accompanying an operation. Patients often cry when nurses are changed, and this is often the sole reason given by a patient for desiring a special nurse.

We have only to note the attitude of children, who have less control and fewer inhibitions, so show their feelings more, to realize this; and most of us,—even in materialistic matters (where nothing vital, or even very important, but only better service with less bother, is at stake), such as having our nails manicured, our hair shampooed, buying hats and shoes and even trifles,—prefer and even insist upon having the same person

"wait on" us; and when ill, to have your breakfast served by one person, your temperature taken by another, your bath or medicine or treatment given by another, and so on, is most distressing, as anyone knows who has been ill. Is there not a danger that the patient will feel that she is a bath to one, a temperature to another, a dose of medicine to another, and to no one of them a human being whose needs, spiritual, mental, physical, or social are all comprehended by anyone?

To illustrate by quoting from a paper previously written: "Our text books, our methods of teaching, the method and character of our supervision in the wards have all tended to stress the mechanical, routine aspects of nursing rather than the vital, human, and educational side. The student is, therefore, apt to think not so much of the patient and his needs but of her needs, that is, of what she has to do, and how she is going to do it and get it done on time. The writer once heard two students on their way to class discussing their morning's work. One said, 'I had a perfectly dreadful morning; I had ten beds to make.' The other agreed that that was 'perfectly dreadful' and wondered how she ever got through with ten beds to make. I wondered why this nurse should have ten empty beds to make and, if so, why she considered it so dreadful, so I stopped to inquire if she meant empty beds. She said, 'No! Patients in them! I thought I'd never get through.' "

The last thought is not an unnatural one, with ten patients to care for, but the whole thought seemed to be related to the beds to be made and not concern for the inadequate care and consideration which the patients must have received.

Effect on the Student. — For the student, assigning a *patient* to her care instead of a *treatment,* etc., means that she should see each patient as a whole, in true perspective, as a member of a family and the community, and, as it were, in all his dimensions. When assignments are made in the form of treatments to be given, the student's understanding of the patient and his needs, and her expression of the art of nursing are apt to be just as incomplete and undeveloped as Egyptian art in which one sees

people represented in the flat, in two dimensions only, and, in distorted, unnatural positions—part of the body, and even part of the head being in profile while part is in front view. Where the complete care of a patient is assigned, the student's understanding and her expression of the art of nursing should be more comparable to Greek art in which one sees people represented in the round, perfect in its expression of all the feelings, thoughts, desires, emotions, and actions which go to make up the complex human being in all his complex human relationships. The resulting conception of nursing and the opportunity given for attaining the perfection of art should be very far-reaching in its implication and effect.

It would seem that any system used *exclusively* or to such an extent as to break up, by specialization (as outlined under the efficiency method), this unity of thought, and conception of the patient (however efficient it may be from the standpoint of getting the work done), would tend to rob the experience of much of the feeling of service and of much of its educational value.

Is there not danger, by the exclusive use of such a system, of giving an incomplete and distorted picture of the disease and its treatment? Does it not tend to direct the student's attention to the treatment and technique rather than to the patient and his needs? Does it not tend to rob nursing of much that is finest in its art? For, just as specialization of labor in industry has reduced it to a series of isolated, mechanical processes, is there not danger that specialized assignments of treatments, etc., may become unrelated, unintelligible, uninteresting tasks to student nurses? While many of us trained, and owe much to our training under the efficiency system, most of us would agree that, from the standpoint of developing artists and the love of an artist for his work, there are many disadvantages in its exclusive use.

Effect on the Administration.— This specialization, called the efficiency method, besides the possible disastrous effect on the education of the student, is often one of the most common sources of complaints, of misunderstandings, discomfort, and unhappiness to patients in our hospitals. As previously stated, it often forces

very sick people, who can ill afford it, to have special nurses. This adds to their trouble and mental anxiety and also lessens the opportunity of experience for our students.

When all the needs of the patient as a member of his family and the community are really considered, we are likely to have happy, well-cared-for patients, appreciative, grateful relatives and friends, and students learning to be intelligent, skilled, sympathetic nurses, ready to serve as responsible workers in the Community Health Program. This means that the hospital is fulfilling two of its most important functions in its rôle of a Community Health Centre.

System or Method Merely a Tool. — It should be remembered, however, in considering the advantages and disadvantages of any method or system, that, just as a river cannot rise above its source, neither can any system rise above the people who initiate and develop it. The system is only a tool, a means to an end. In the hands of a skilled teacher a poor system may develop good nurses, whereas a good system in unskilled hands may develop poor nurses.

The Use of Assignments and a Scientific Method of Study in the Wards. — We have said that our knowledge of nursing care is too vague and general, a sort of blanket treatment, not developed and outlined according to the needs of the individual patient. For instance, the treatment prescribed by a doctor varies greatly according to the diagnosis, symptoms, and individual differences, etc. Not only is the treatment for cardiac patients different from that for, let us say, hyperthyroidism, but it differs for different cardiac patients and also for different stages of the disease.

So far from this careful study and differentiation is, on the whole, our present knowledge and practice in nursing, that a student can, and, in some hospitals sometimes does, give nursing care to the patients on one whole side of a ward, without even knowing the diagnoses, or knowing this, is conscious of little more. *We* are held responsible for the nursing care—should we not prescribe nursing care for each patient as doctors prescribe

medical care? To prescribe simply means "to write before" or "to designate in writing," and nursing care, or the care a nurse is expected by the hospital, doctors, and public to give, includes, not only carrying out faithfully and skillfully what the doctor has prescribed, but often much more; so much more sometimes, as in typhoid or pneumonia, or in the care of infants, that a doctor will say "his life will depend upon the nursing care he receives."

If there is anything curative in personal hygiene,—in mental and physical rest and comfort, diversion, and occupation; in a feeling of cleanliness, in a mouth sweet and clean; in hair clean, well brushed, free from pediculi; in food well selected, in proper amounts, attractively served at the proper time and under proper conditions; if there is anything curative in the effect of plenty of water to drink; in the formation of proper habits of elimination; in the habits of sleep, play, and general behaviour of children; in the selection of a rubber ring for this patient, a book for another, extra pillows for another, a hot-water bag for another, the bed protected with pillows for another, an air mattress for another, a cradle for another, and all the manifold things which a nurse may do to bring comfort of mind and body to the patient—then there is much for a nurse to prescribe which is not prescribed by a doctor.

There is a doctor's "order book" but not a nurse's "order book" in the ward; nowhere, in most hospitals, at least, is written the prescribed nursing care. Any directions given are usually oral and we know how subject to error and neglect these are—for this reason we usually insist upon written instructions from the doctor. Let me tell you an incident to illustrate this need.

One morning when going to visit a student nurse ill with diphtheria, I met a student nurse just leaving the room, who, when asked about the patient's condition, said: "Oh! She is better to-day; she is taking her own bath." This meant that neither nurse knew the danger such exertion incurred. When the situation was mentioned to the headnurse, she was shocked, and said, that while directions for nursing care or for avoiding exertion

were not written anywhere, both nurses, although they were students, "should have known better"—just how or why was not clear. Was this insuring good nursing care for the patient, or learning to be a good nurse by experience for the student? And is the avoidance of exertion in this case not of sufficient importance to be prescribed in writing? Not so very long ago this would have been prescribed by the doctor just as many other things, formerly considered medical, are now considered nursing treatment.

Study of Needs to Precede Nursing Care. — In the classroom it is customary to give assignments out of a book for study, in order that the students may gain knowledge for some *future use* in caring for some *unknown patient.* And yet in the ward, where the student has immediate need and, therefore, an interest and motive for acquiring such knowledge we, as a rule, fail to make any assignment except in terms of work to be done in the present or immediate future. By this failure we miss our greatest opportunity for teaching, and the student for learning. Can a student understand a patient's needs as an individual? Can she, a stranger unintroduced, make a satisfactory immediate contact? And can she readily form any broader conception of nursing than that of doing more or less mechanical routine procedures, if she is not expected to, and does not read his history, study the diseased condition and the treatment prescribed by the doctor, make her own observations of his needs, and formulate a plan of nursing care based upon this study? Without this study and formulation of a plan (formulated by the student in so far as her knowledge will permit but carefully supervised by the headnurse) would the care of the patient be a project, a purposeful activity? To make it a project, when a new patient is to be assigned, should the assignment not be made on the preceding day and references and suggestions be given the student as to how to make her study in a scientific way?

Method of Assigning Patients. — The patients should be assigned by the headnurse after conferring with the teaching supervisor. A choice of patients made by a student with reasons

satisfactory to the headnurse should receive consideration. Emphasis should be placed not on the medical problem, except as it relates to nursing, but on the nursing problem, the two together meeting all the needs of the patient.

As stated previously the special nursing problem to solve may relate to various aspects, mental or physical, family or social; or there may be no special reason for assigning a particular patient except that he or she requires care. The student should understand that this, in itself, is sufficient justification to warrant her most thoughtful care and attention. Whether or not it may be deemed necessary for the student to continue actual nursing care beyond a certain period, she should continue to study and follow his progress with interest and concern.

It may be mentioned here that if the ward or clinic is to be a classroom to teach and learn in, there should be text and reference books readily available for study and guidance. There should also be available a quiet room or space for reading and writing and for teaching or conferences.

Treatment Cards Attached to Chart. — The value and the pressing demand for cumulative information in writing relating to nursing has already been emphasized. The need for a written program of nursing care for each patient has also been emphasized. There is no doubt that a system which requires a definite formulation, in black and white, of the nursing care we propose to give (based on such studies already indicated) will greatly improve the character and quality of our work, and, therefore, the care of our patients, and the education of our students. It will tend to stimulate and develop in ourselves and in our students more thought and imagination, a greater degree of accuracy and precision, keener observation and an interpretation of the significance and relationships of facts, and a more conscious effort on our part to build up the ideals, knowledge, and standards of the nursing profession.

A system which is being tried with increasing success, is to attach to the chart a card on which is recorded under *Medical*

Treatment, the treatment prescribed by the doctor; and under *Nursing Treatment,* the care prescribed by the headnurse or supervisor. These cards are increasingly popular and in demand with the medical staff, and in some wards are found indispensable. In addition, they tend to inspire confidence in the amount and quality of nursing care given and should gradually and soundly build up a conception of nursing as having a content and method of its own, a sister profession working side by side with the medical profession, with a common purpose of service in the prevention and cure of disease, and, to that end, the education of student doctors and nurses.

TREATMENT

Name *Age* *Ward*

Medical Treatment	*Nursing Treatment in Relation To*
1. Cardinal Symptoms:	1. Medical Treatment Prescribed:
2. Diet:	2. Safety and Comfort, Mental and Physical:
3. Eliminations:	3. Hygiene and Health Habits:
4. Medications:	4. Social Needs:
5. Special Treatments:	5. Instruction:

NOTE.—Diagnosis on reverse side. Spacing on card may be arranged to allow written directions under suitable headings.

Each card would be made out by the student, responsible for the patient, after submitting her plan, for approval, to the head nurse. The size and shape of the card would necessarily be adapted to the special charts used. On the reverse side would be the patient's name, diagnosis, and special remarks.

From the administrative as well as the educational standpoint, the use of such cards has many immediate advantages. Mistakes, neglect, treatments omitted, or treatments continued when no longer needed, are quickly brought to one's attention. The card gives a complete picture of the treatments prescribed, and forms a varied content of correlated knowledge—the reason *why* for each treatment or medicine, etc.,—for an individual lesson or case study.

Such information has permanent as well as immediate value. When the patient is discharged, or when new cards are written, the cards may be filed under a classification of diseases. By such a method, we collect not only a mass of information about nursing in specific cases, and about nursing in general, but we have organized knowledge in a form which permits us to go back and check up our work, to note progress made in content and method, to compare facts presented by the study of a great many cases of the same class, and of different classes, and to select facts common to all cases of the same class; in other words, to formulate principles, to organize knowledge—the process of making knowledge, which is science.

Case Studies and Experience Records in Teaching and Learning

The value of case studies as the basis of diagnosis and treatment has been fully demonstrated and accepted in law, medicine, and social case work; and in our own profession there is a growing interest and appreciation of their use and value. In fact, more and more we are coming to recognize that the methods and aims are and should be essentially the same in all types of service, the case study method being the common denominator. Also, as previously stated, we are coming more and more to believe that there should be no sharp line drawn between the hospital and the community. A man is still a member of his family and of the community—"No man liveth unto himself"—whether he be at his work, in his home, or a patient in the hospital. So that, in providing for the patient's needs, just as we recognize that you cannot separate mind from body, or *vice versa,* neither can you separate the family, or the social needs and relationships. A nurse is equally a public health and social service worker whether she cares for a patient in the hospital or in his home and whether she cares for one patient or more than one in the community.

The following outline is suggested as a guide to the students in making their case studies.

Outline of Case Study.

I. *History.*

(a) Social—as far as it bears on medical and nursing care.

1. Source—referred by?
2. Age—Nativity—Citizenship?
3. Occupation—Is it related to the health problem?
4. Family responsibilities—number of children; maximum and minimum age of children.
5. Standards of living—neighborhood; home conditions, number of rooms, etc.; sanitation.
6. The family problem due to sickness.
7. Known to Agencies—Out-Patient Department, and the Agencies' present plan of treatment.

(b) Health Habits.

1. Mental outlook, use of leisure, interests, or hobbies, etc.
2. Cleanliness—care of teeth, hair, nails, bathing, etc.
3. Dietary—appetite, condition of teeth, weight; number of meals; types of food, likes and dislikes; fluids, water, tea, coffee.
4. Sleep and rest.
5. Exercise and fresh air.
6. Eliminations—regularity.
7. Child habits—daily regime, rising, going to bed, rest, play, bathing, meals, etc. Bed wetting, night terrors, nail biting, thumb sucking, sleep walking, tics, masturbation, social behaviour. For suggested study of behaviour use nursery school form.

(c) Medical History.

Past.

Present—including duration of disease, etc. (May include complications and sequelae.)

II. *Symptoms,* physical signs and diagnostic measures.

1. Subjective.
2. Objective.
3. Results of examination—X-ray, laboratory reports, etc.

III. *Diagnosis.*

(a) Social diagnosis, that is, what the immediate problem seems to be.

(b) Medical diagnosis.

IV. *Treatment and Nursing Care.*

(a) Medical—Doctor's orders regarding:

1. Rest, diet, nutrition, eliminations.
2. Surgical measures: major, minor.
3. Physiotherapy.
4. Medications.
5. Special treatments.

(b) Nursing in relation to:

1. Social needs—arrangements for care of home, of family, of children, friends, position, or work, etc.
2. Medical needs—observation and recording of symptoms relating to medical diagnosis, results of treatments, patient's condition, etc.
3. Health habits—see outline above—including occupational therapy.
4. Providing suitable environment—fresh air, proper temperature, quiet, order, cleanliness, general attractiveness.
5. Instruction in health habits, etc., including preventive measures.

V. *Progress and Prognosis.* (May include complications and sequelae.)

VI. *Discharge and "Follow Up"*—items as:

1. Instruction given relating to treatment and prevention.
2. Return to home—work—rest—school—treatment and prevention.
3. Referred to Out-Patient Department—treatment and prevention.
4. Referred to Agencies—treatment and prevention.
5. Sent to convalescent home, orphanage, etc., treatment and prevention.

VII. *Bibliography.*

NOTE—It is expected that modifications will be made to meet the needs of any particular study as in obstetrics, communicable diseases, etc. When the temperature chart is of particular interest, as in typhoid or pneumonia, a copy of the chart should be included in the study.

The items given in the outline under the Social History and under Health Habits are not meant to suggest that the students gain this information by asking the patients questions, just getting so many facts. On the contrary this is discouraged. The items are suggestive and act as a guide as to what information would be helpful in understanding the needs of the patients. They are meant to stimulate and direct keen observation and to teach the students to interpret what their observations reveal with a view toward better, more intelligent and sympathetic nursing. It is understood that if a student makes a desirable approach or contact with a patient, and the patient has any source of trouble or worry, he will be only too glad to talk to the nurse about it if she has won his confidence.

Method of Using Case Studies. — Students are rotated from service to service in order that they may have a wide and varied experience in observing and caring for patients, and a broad knowledge of health and disease in all its aspects and manifestations. It is, therefore, advisable that they keep case studies in each of the services in both hospital and dispensary.

The student should select the study she wishes to make and submit it to the headnurse who will discuss with her the wisdom of her choice, and find out whether or not the student needs help and guidance before going on with it. The student should present a definite purpose for the study and a general plan.

The *number* of studies to be made is an important item. There may be one every two weeks, or one each four or six weeks, etc. But, in general, it may be said that it is much better to have the students make one complete study in any service, one which really allows time for observation, for thought and study, than to have them make a number of hurried superficial reports which are not studies but exercises. The chief purpose of the study is to develop interest in the needs of the individual, the power of observation, thoughtful analysis, and an understanding of the patient which will insure adequate care.

Conferences.—The studies should be handed to the headnurse promptly on the day assigned. She, together with the super-

visor, will correct and return them to the students in conference. It need scarcely be said that this individual instruction, while time consuming, is the most effective form of teaching, and creates not only a better understanding and care of patients, but a better understanding and a more co-operative, constructive relationship between headnurse, supervisor, and students. Group conferences as well as individual conferences should be held in which selected cases are discussed.

Case Study References. — Such case studies form the most valuable and fruitful material for teaching and discussion. They recall our past experience in all its human relationships in the most vivid and realistic way, and form a valuable source of information which can be obtained in no other way.

Case Study Committee. — To preserve this valuable information, as well as to improve the content and method of the studies themselves, it is suggested that a committee of headnurses, supervisors, and instructors be formed to study just what constitutes a good case study, and to select the best of the studies prepared by the students to build up in each school a *case study reference library.* At the end of the year, the best studies representing the various services might be printed in an inexpensive loose-leaf pamphlet form which might be purchased and used as a text book. The students, by this stamp of approval, would be rewarded for their efforts and every student would be eager to have one, at least, of her studies selected. The law of effect in learning teaches us that satisfaction greatly promotes the learning process.

Students Experience Records

We have compared our course in nursing to a course in any other science, emphasizing the need for careful planning, teaching, and supervision of the laboratory experience. In a science laboratory, an instructor also requires the students to keep detailed records of their experiments under appropriate headings, such as the purpose of the experiment, the conditions under which it is conducted, the equipment used, the steps in the proc-

ess, the results and conclusions. The need for similar records of our students' experience, to be corrected, graded, and discussed with the students, has already been emphasized.

To carry out the analogy and to show the purpose and relationship of the case studies and experience records, let us take, as an illustration of an experiment in a laboratory and its application to nursing, the examination of tissues or of blood cells with a microscope. (The same purpose and relationships might be shown by the study of the stars, in their constellations, their relative size and brightness, with the telescope.)

As you know, it is advisable, for many reasons, to examine your field first with the low power. We see spread out before us a large field in which there are many, many cells. We see that there are two main kinds of cells, red and white, and again that there are different types of white cells. We gain some idea of the relative size and number of these cells in the various groups and their relations to each other, and if we perform certain tests we can actually estimate the total number in the blood and many other facts about them.

Now the study of the student's practical experience recorded on these experience records, which we will examine later, seems to me analogous to this—it is, so to speak, examining our field of experience with the low power of the microscope. We see, and the student sees, her whole experience spread out before us in proper perspective. We see the number and variety of patients or cases cared for, the number in each group, all the treatments given in their proper relation, and all the symptoms observed in their proper relation to the disease or treatment. The records tell us what we have no other way of finding out. To go back to the use of the microscope!

When a student looks through a microscope we have no way of knowing what she sees, understands, or learns—she may not be looking at the right field at all; she may have the lens focussed badly; she may be looking at a bubble of air or dust on the slide or lens. What she sees may mean little or nothing to her. To help her, we must look through the microscope, help her to focus

it, direct her observations, have her draw, describe, compare with reference book, and record what she sees.

It is the same with the practical experience. When a student is caring for patients, carrying out procedures, charting, etc., we have no assurance that she is learning anything beyond the mere mechanical adjustments required by the procedure unrelated to the individual patient or anything else. Many illustrations might be given of this failure to observe or to relate cause and effect. Just to give one illustration!

The other day a student assisting with dressings had no observations recorded on her experience record. When questioned, she said: "Oh! I am on the dressing carriage. I have no patients assigned."

Now, as we all know, when that student was assigned to the dressing carriage it was to give her, not only the practice in aseptic technique, but the opportunity to observe dressings, the treatment and healing of wounds in relation to the diagnosis or operation and to the patient's general condition.

Many similar illustrations might be given bearing out the truth of the saying that "Many have eyes to see but see not, ears to hear and hear not." Two students, side by side, may observe the same operation, or treatment, or patient. Apparently both are seeing the same things and having the same experience; whereas the attention and thoughts of one may be focussed on some unimportant, irrelevant aspect of the situation, or even on something entirely remote. Even when greatly interested students frequently do not know (therefore must be taught) what to observe, what is important and what is unimportant.

These records thus show us how meagre a student's observations and education may be if we do not have some way of checking up as a means to helping and guiding her in focussing attention on what she is supposed to see and learn. They make it possible for not only one person but the whole faculty, and not only the faculty of the school but any expert group, to look through the microscope, as it were, at any student's experience, if desired. This means that the minds of many people,

instead of one, can reflect on this experience, evaluate it, and reshape it.

In relation to the recording of practical experience Dr. Dewey gives us the following food for thought: "Man differs from the lower animals because he preserves his past experiences." "What happened in the past is lived again in memory." "And all this which makes the difference between bestiality and humanity, between culture and merely physical nature, is because man remembers, preserving and recording his experiences."

"At the time, however, attention is taken up with the practical details and with the strain of uncertainty. Only later do the details compose into a story and fuse into a whole of meaning. At the time of practical experience man exists from moment to moment, preoccupied with the task of the moment."

These records help the students to help themselves. They not only record the task of the moment but insure that the student will learn the diagnosis, the family or social problems, and that she will observe the symptoms of the disease, the result of treatments, as well as the factors in her work which make for success or failure.

So much for the recording of the student's experience and the experience records. They should not only be of incalculable value to the students, but to us as a means of regulating their experience and developing a system of credits based on the actual content, teaching, and educational value of their experience.

Now let us go back to our study of the blood cells or tissues, this time with the high power lens. We see a greatly restricted field in which, perhaps, only one type of blood cell is represented. We are enabled, however, to make an intensive study of this one type, noting all its characteristics in detail. The knowledge gained is most illuminating and valuable, but any conclusions we might draw about blood cells and any applications we might make would be very misleading if we did not enlarge our field, compare these cells with others of the same type and of different types, and with the "low power" picture in the background.

This "high power" examination is analogous to our case study —an intensive study of one selected patient, the emphasis being on the patient as a whole, the observation of symptoms, the social and medical aspects, and a constructive program of nursing care.

Placing patients in a long row of beds, the beds all alike, the patients bathed, dressed alike, fed more or less alike, all subject to the same conditions, tends to rob them of their individuality and reduce all, more or less, to the same level just as the uniform does in an army. The case study is an effective way of restoring to the patient his individuality and of insuring that we meet his needs as an individual, a member of a family and of the community.

The record below is a simple form on which the students can record each month an analysis and classification of their experience in an organized way. It will be observed that emphasis is placed on the observation of the patient as a whole, on the number and variety of patients cared for during the month in terms of diagnosis and days cared for, upon the importance of observations and their interpretation, upon discrimination and thought in putting facts and observations together in their right relationships, and upon responsibility on the part of the student for self-analysis and progress in terms of standards of work given.

Written Instructions. — To insure motivation and an intelligent interest and appreciation of statistics on the part of the students, the purpose of the records, their relation to the course, and to the case studies should be explained. To insure accuracy and uniformity, also, written instructions should be given. In addition, to avoid time spent in writing a mass of detail which detracts from the interest and usefulness of the records (because it obscures the real experience in nursing, in medicine, surgery, pediatrics, etc.), the supervisor in each service should write out what she considers "routine"; that is, what a student is expected to do for each patient assigned regardless in most cases of the diagnoses. For instance, the following might be the routine in a medical or surgical ward. The routine consists of the fun-

STUDENT EXPERIENCE RECORD

Form 1 Page 1

Name_____ Class_____

Date	Location	Time	Case No.	PATIENTS CARED FOR	MEDICAL DIAGNOSIS	OBSERVATIONS OF SYMPTOMS AND SIGNS RELATED TO MEDICAL DIAGNOSIS	FAMILY OR SOCIAL PROBLEMS	

PAGE

Record used at Yale University School of Nursing

126

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STUDENT EXPERIENCE RECORD

Name_____ Class_____

Date	Case No.	NURSING CARE, TREATMENTS, DIETS, TEACHING EXPERIENCE, ETC.	No. Times	OBSERVATIONS OF SYMPTOMS RELATED TO NURSING CARE, TREATMENTS, DIETS, ETC.	JOB ANALYSIS STUDENT'S CRITICISM OF WORK
				PAGE	

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STUDENT EXPERIENCE RECORD

Form 1 Page 1

Name_____ Class_____

Date	Location	Time	Case No.	PATIENTS CARED FOR	MEDICAL DIAGNOSIS	OBSERVATIONS OF SYMPTOMS AND SIGNS RELATED TO MEDICAL DIAGNOSIS	FAMILY OR SOCIAL PROBLEMS	

damentals in personal hygiene, and in normal living, and, therefore, in preventive medicine and in nursing.

Routine Nursing Care in Medacal and Surgical Wards

I. *Morning Conference with Headnurse.*

Listen to the reading of the night report. Note particularly all information relating to the condition of each of your patients, such as the amount and character of sleep, symptoms and signs indicating change in condition, special treatments given, and all new medical and nursing orders.

II. *Personal Care of Patients.*

1. Greet patient, note general condition, and attend to immediate needs, with special attention to needs of the very ill. Plan work.
2. Take temperature, pulse, and respiration of patients assigned. Chart in temperature book at once, and on charts during breakfast or before doctors' rounds.
3. Prepare patients and serve breakfast. Feed helpless patients, leaving to last.
4. During breakfast hour prepare for morning duties—collect linen and equipment, etc.
5. Remove breakfast trays, etc.
6. Give morning toilet, including use of bedpan and all necessary devices for making patients comfortable. Each patient must have at least three complete baths weekly, and all very ill patients must have a *daily* bath. Morning care includes complete remaking of bed with due regard to economy in changing linen. Unless contraindicated by doctor, all binders should be removed and replaced by clean binders when necessary.

III. *Patients' Belongings and Environment.*

1. Bedside tables: Attention to cleanliness, order, removal of unnecessary and undesirable articles including food, paper bags, etc., and providing proper toilet equipment in bedside tables.
2. Attention to supply of fresh drinking water and other wants—occupational therapy, care of flowers, etc.

IV. *Reporting, Charting, or Recording.*

1. Report to the headnurse any mental symptoms which may be interfering with patient's comfort (such as worry over family problems), and any symptoms which may suggest approaching delirium or any other psychoses.
2. Report any physical symptoms or signs indicating change in patient's condition. Report any sign of pediculi or suspicion of bedsores.
3. Chart temperature, pulse, and respiration, and all observation of symptoms, etc., on the symptom record. Chart fluids taken on fluid or intake sheet. Chart intake, output, and defecation. All charting to be done before doctors' "rounds" and at the earliest moment available.

The student would record this *in toto* at the beginning of the month. Such items would not then appear again but only such treatments, medical, surgical, pediatric, etc., given by the student which had a definite relation to the treatment of the disease as shown in the record below. The names of the patients assigned would appear each day, but information relating to each already recorded would not be repeated but merely checked, and only new observations and treatments, etc., would be recorded day by day.

In the column which calls for a criticism of their work, success or failure in measuring up to standards would be indicated opposite the treatment, stating the particular item of success or failure, such as "unnecessary time taken because of lack of planning," "patient more comfortable because thin mattress was exchanged for a better one," "patient tired (loss of energy) because allowed to remain up too long," "patient made happy because news obtained about children," "patient looking uncomfortable and work unfinished because pillows not properly arranged," and so on.

The purpose of this analysis and criticism, as *explained to the students,* is to develop a *constructively critical attitude* toward their work and a personal responsibility for the advancement, not only of their own knowledge and skill, and capacity for independent work and self-direction, but of the general content

and methods of nursing education. Without such an analysis we stumble on blindly in an unintelligent and inefficient manner. Through it we are unlikely to fail to measure up to the ideals, standards of work, and the successful service which we aim to achieve.

In addition to the ideals, attitudes, and standards of work given, the form called the Headnurse Instructor's Report (frequently called the Efficiency Report) is explained to the students. (These reports when actually made are discussed with the students by the headnurse before placing them on file as a permanent record.) These standards all serve as measuring rods by which we may judge our own success and progress, and by which we may be judged.

The analysis may fall under four main headings, such as: 1. Method of planning and success in accomplishing the day's work as a whole. 2. The same in carrying out each duty or procedure, that is, did I carry out each procedure with due regard to the safety and comfort of the patient, the therapeutic effect, etc.? 3. Interest and effort on the part of the student in finding out all the necessary information concerning patients for whom she is responsible. 4. Personal responsibility accepted by the student in availing herself of all the opportunities for learning through experience. Criticisms made by others would be entered with quotations and name in brackets.

The *time* required for keeping such records, according to statements made by the students, is from ten to twenty minutes daily. As an indication of the teaching and learning value of such records, a remark made by one of the students on the matter of time is enlightening. She said it would not take more than ten minutes each day if she "did not have to look up the meaning of so many words." Without such records would she have looked up the meaning of "words" and how much would she have learned by her experience?

It may be emphasized here that if nursing is ever to make even a remote claim to being a science, or even to being conducted on a scientific basis, it must be built up like all branches

of science; that is, by the most careful, unbiased observations and recording of often seemingly trivial details from which—by organizing, classifying, analyzing, selecting, inferring, drawing, and testing conclusions—a body of knowledge or principles are finally evolved.

Monthly Summary of Experience.—On this form the students record a summary of their daily experience indicated by the headings. The standards of work are checked if the daily job analysis column shows that due regard was given to each in carrying out the various treatments recorded.

Evaluation of Experience. — The reverse side of the form shows the evaluation by the headnurse of the experience or content of the course in terms of number and variety of patients, treatments, etc., and whether or not the student's hours on duty and her interest and effort made it possible to make the most of it. This evaluation is important in creating in both teacher and students the proper conception of the ward experience, and supplies necessary data for measuring the actual experience of the students.

Conferences. — The daily experience sheets should be handed promptly to the headnurse at stated intervals to determine whether or not the student is profiting by her experience, and for correction and further guidance, and then returned to the student in conference.

The monthly summary should also be discussed with the students, then filed as a permanent record for future use in evaluating and reshaping the experience of that student (and future students), avoiding useless repetitions, and making up deficiencies in the various services.

Method of Keeping Records. — A satisfactory way of keeping all records kept by the students is to have a study table or desk in the ward and a file with a folder for each student in which she keeps her work. It is then accessible to both student and teacher. Its presence in the ward also emphasizes the educational aspect of the experience.

Method of Grading Experience. — The student's achievement

SUMMARY MONTHLY STUDENT EXPERIENCE RECORD

Form 2

Date _____ Name _____

Location _____ Class _____

MEDICAL DIAGNOSIS	No. Cases	No. Days	FAMILY OR SOCIAL PROBLEMS	No. Cases	NURSING CARE, DIETS, TREATMENTS, TEACHING EXPERIENCE	No. Times	Standards of Work: Safety of Patient	Therapeutic Effect	Comfort of Patient	Economy Energy	Economy Time	Economy Materials	Finished Work

SUMMARY MONTHLY STUDENT EXPERIENCE RECORD—(Continued)

Standards of Work

MEDICAL DIAGNOSIS	No. Cases	No. Days	FAMILY OR SOCIAL PROBLEMS	No. Cases	NURSING CARE, DIETS, TREATMENTS, TEACHING EXPERIENCE	No. Times	Safety of Patient	Therapeutic Effect	Comfort of Patient	Economy Energy	Economy Time	Economy Materials	Finished Work

EVALUATION OF EXPERIENCE BY HEAD NURSE

Experience Offered
- Average No. of Patients
- Variety of Cases
- Average Duration in Hospital
- Treatments Ordered
  - Number
  - Types and Variety
  - No. of Times

Student's Hours and Time on Duty

Student's Use of Experience

and progress in any experience should be evaluated by the head-nurse in conference with the teaching supervisor. Fifty per cent, or perhaps more, might be allowed for the knowledge, understanding, and skill shown in the actual care of patients, fifty per cent for the knowledge, understanding, and appreciation shown in written work in the form of case studies, experience records, plans for nursing care of patients, charts, and individual treatment cards, etc. Such a method gives a fairer estimate of the student's experience. It gives credit to the student who stands high in both knowledge and skill, and to the student who is "good in theory but not in practice," and *vice versa.* It gives the student a better understanding of what constitutes experience and learning by experience.

In grading, recognition should be given to the student's achievement in the light of her previous experience and education, her individual capacity, her health and general fitness for the particular service.

Value of the Written Word. — Historians, philosophers, and educators all tell us "that some form of written language is an indispensable basis for all civilization or progress, and that when written records were lost, or became meaningless because no one could read or write, then the civilizations which they alone made possible quickly disintegrated," because the written word is what made the quick dissemination of knowledge, feelings, and united action, necessary for a civilization, possible.

The written word, necessary for a civilization, is likewise necessary for the progress of the nursing profession. Writing, or recording our thoughts, our feelings, our ideas of people and things, our aims, our plans, the results of our own work or studies and those of others has many values. Writing crystallizes, clarifies our ideas, and makes for conciseness and accuracy; things "look different," in writing, and we will often *say* things we would hesitate to commit ourselves to in writing. Facts not written, also, reach only a few people and have little productive or permanent value. Written facts can be tested and verified; they may be classified and analyzed; comparisons may

be made and new relationships and principles revealed. Records serve as a future reference and guide and by systematic review and checking up, they enable us to evaluate the soundness of our methods and the progress made in both content or knowledge and in methods of work.

All of this makes for a better quality and standard of work, better service to our patients, better teaching, more scientific methods, better education for our students, better nurses, and better service to the community in the prevention and cure of disease; and all these sum up the aims of the course in the Principles and Practice of Nursing and of the Profession of Nursing.

REFERENCES

DEWEY, JOHN.—*Democracy and Education. Experience and Nature. Human Nature and Conduct.*